FCC RADIO TEST REPORT

FCC ID	:	**TVE-241001**
Equipment	:	**Network Security Gateway**
Brand Name	:	**FORTINET**
Model Name	:	**FortiWiFi 70G-POExxxxxxxxxx, FORTIWIFI-70G-POExxxxxxxxxx, FWF-70G-POExxxxxxxxxx, FortiWiFi 71G-POExxxxxxxxxx, FORTIWIFI-71G-POExxxxxxxxxx, FWF-71G-POExxxxxxxxxx (where "x" can be used as "0-9", or "A-Z", or "-", or blank for software changes or marketing purposes only)**
Applicant	:	**Fortinet Inc. 909 Kifer Rd., Sunnyvale, CA 94086, United States**
Manufacturer	:	**Fortinet Inc. 909 Kifer Rd., Sunnyvale, CA 94086, United States**
Standard	:	**FCC Part 15 Subpart E §15.407**

The product was received on Nov. 20, 2024 and testing was performed from Nov. 22, 2024 to Feb. 24, 2025. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory
No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issue Date
FR4N1307C	01	Initial issue of report	Mar. 11, 2025

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403	26dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	Pass	-
3.3	15.407(a)	Power Spectral Density	Pass	-
3.4	15.407(b)	Unwanted Emissions	Pass	-
3.5	15.207	AC Conducted Emission	Pass	-
3.6	15.203	Antenna Requirement	Pass	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”.

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Yun Huang

Report Producer: Lucy Wu

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature
General Specs Bluetooth-LE, Wi-Fi 2.4GHz 802.11b/g/n/ax and Wi-Fi 5GHz 802.11a/n/ac/ax. **Antenna Type** WLAN: **<Ant. 1>:** Dipole Antenna **<Ant. 2>:** Dipole Antenna **<Ant. 3>:** Dipole Antenna

Antenna information		
5150 MHz ~ 5250 MHz	Peak Gain (dBi)	<Ant. 1>: 3.27 <Ant. 2>: 3.27 <Ant. 3>: 3.27
5250 MHz ~ 5350 MHz	Peak Gain (dBi)	<Ant. 1>: 2.60 <Ant. 2>: 2.60 <Ant. 3>: 2.60
5470 MHz ~ 5725 MHz	Peak Gain (dBi)	<Ant. 1>: 2.01 <Ant. 2>: 2.01 <Ant. 3>: 2.01

Remark:

1. The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.
2. Antenna 3 is used for receiving only.

Model differences description		
Model Feature	**FWF-71G-POE**	**FWF-70G-POE**
M.2 SSD	V	X

Remark: All the tests were performed with Model: FWF-71G-POE.

1.1.1 Antenna Directional Gain

<For CDD Mode>

Follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f)ii)

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows:

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

G_{ANT} is set equal to the gain of the antenna having the highest gain.

For PSD measurements, the directional gain calculation.

Array Gain = 10 log(NANT/NSS) dB.

The directional gain "DG" is calculated as following table.

	Ant 1 (dBi)	Ant 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band I	3.27	3.27	3.27	6.28	0.00	0.28
Band II	2.60	2.60	2.60	5.61	0.00	0.00
Band III	2.01	2.01	2.01	5.02	0.00	0.00

Calculation example:

If a device has two antenna, G_{ANT1}= 3.27dBi; G_{ANT2}=3.27dBi

Directional gain of power measurement = max(3.27, 3.27) + 0 = 3.27 dBi

Directional gain of PSD derived from formula which is

10 x log { { [10^ (3.27 dBi / 20) + 10^ (3.27 dBi / 20)] ^ 2 } / 2 }

= 6.28 dBi

Power limit reduction = Composite gain – 6dBi, (min = 0)

PSD limit reduction = Composite gain + PSD Array gain – 6dBi, (min = 0)

<For TXBF Mode>

The EUT supports beamforming modes , then

Follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)e)ii)

Directional gain = GANT + 10 log(NANT/NSS) dBi,

where NSS = the number of independent spatial streams of data and GANT is the antenna gain in dBi

The directional gain "DG" is calculated as following table.

	Ant 1 (dBi)	Ant 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band I	3.27	3.27	6.28	6.28	0.28	0.28
Band II	2.60	2.60	5.61	5.61	0.00	0.00
Band III	2.01	2.01	5.02	5.02	0.00	0.00

Calculation example:

Directional gain is derived from formula which is

10 x log { { [10^ (3.27 dBi / 20) + 10^ (3.27 dBi / 20)] ^ 2 } / 2 }

= 6.28 dBi

Power and PSD limit reduction = Composite gain – 6dBi, (min = 0)

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	TH05-HY, CO07-HY, 03CH11-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW3786

1.4 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- FCC KDB 414788 D01 Radiated Test Site v01r01.
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.

2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in two degree (Degree 0 or Degree 90), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and only the worst case emissions were reported in this report.

b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5725 MHz Band 3 (U-NII-2C)	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
TDWR Channel	118*	5590	124	5620
	120	5600	126*	5630
	122#	5610	128	5640

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
Straddle Channel	138#	5690	144	5720
	142*	5710		

Note:

1. The above Frequency and Channel with "*" are 802.11n HT40 and 802.11ac VHT40 and 802.11ax HE40.
2. The above Frequency and Channel with "#" are 802.11ac VHT80 and 802.11ax HE80.

2.2 Test Mode

The SISO mode conducted power is covered by MIMO mode per chain, so only the MIMO mode is tested.

The power for 802.11n mode is smaller than 802.11ac mode, so all other conducted and radiated test is covered by 802.11ac mode.

The power for TXBF mode is smaller than CDD mode, so all other conducted and radiated test is covered by CDD mode.

The final test modes include the worst data rates for each modulation shown in the table below.

CDD Mode

Modulation	Data Rate
802.11a	**6 Mbps**
802.11n HT20 (Covered by VHT20)	**MCS0**
802.11n HT40 (Covered by VHT40)	**MCS0**
802.11ac VHT20	**MCS0**
802.11ac VHT40	**MCS0**
802.11ac VHT80	**MCS0**
802.11ax HE20	**MCS0**
802.11ax HE40	**MCS0**
802.11ax HE80	**MCS0**

Remark: The conducted power level of each chain in MIMO mode is equal or higher than SISO mode.

TXBF Mode

Modulation	Data Rate
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0

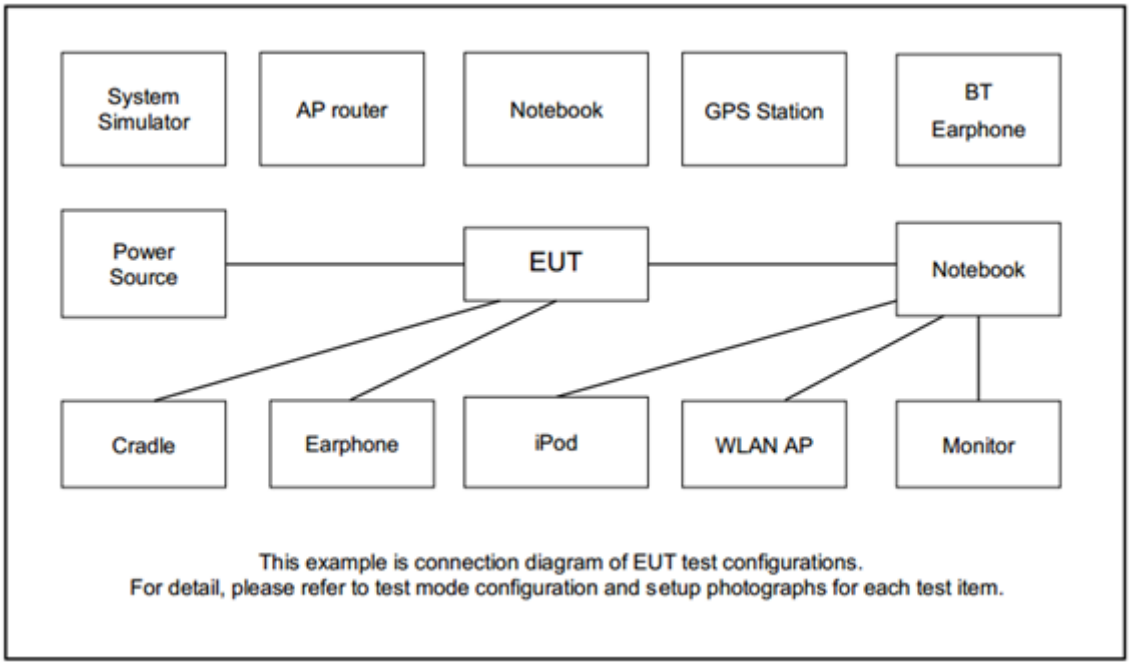
Remark: The conducted power level of each chain in MIMO mode is equal or higher than SISO mode.

Test Cases	
AC Conducted Emission	Mode 1 : WLAN (5GHz) Link + Adapter

Remark:

1. For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.
2. The detailed Radiated test modes are shown in Appendix C.

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	ASUS	RT-AC52	MSQ-RTAC4A00	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Notebook	DELL	Latitude5310	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

2.5 EUT Operation Test Setup

The RF test items, utility “MT7961 QA 0.0.2.78” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10 dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

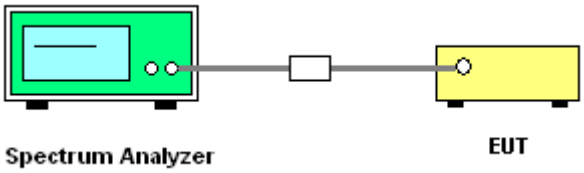
3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) ≥ 3 * RBW.
8. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

For the 5.15–5.25 GHz bands:

■ For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

For the 5.25–5.725 GHz bands:

■ The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

3.2.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.2.3 Test Procedures

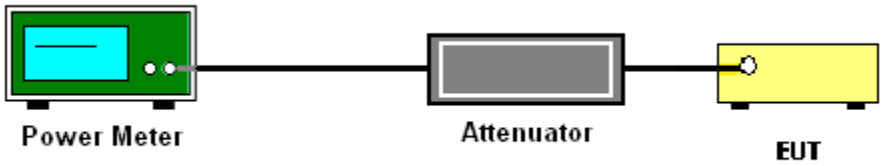
The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM-G (Measurement using a gated RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter.
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

For the 5.15–5.25 GHz bands:

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1.0 MHz band. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1.0 MHz band.

For the 5.25–5.725 GHz bands:

The maximum power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Section F) Maximum power spectral density.

 # Method SA-2 #

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

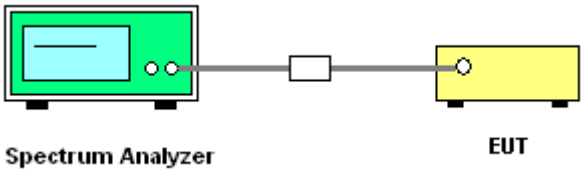
- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW ≥ 3 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.

1. The RF output of EUT is connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

   Method (a): Measure and sum the spectra across the outputs.

   The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points; the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

3.4 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

3.4.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of –27dBm/MHz.

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

(2) Unwanted spurious emissions falls in restricted bands shall comply with the general field strength limits as below table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

Note: The following formula is used to convert the EIRP to field strength.

$$E=\frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts)

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.3

(3) KDB789033 D02 v02r01 G)2)c)

(i) Sections 15.407(b)(1-3) specifies the unwanted emissions limit for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of −27 dBm/MHz.

(ii) Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are based on the use of a peak detector.

3.4.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

(1) Procedure for Unwanted Emissions Measurements Below 1000 MHz

- RBW = 120 kHz
- VBW = 300 kHz
- Detector = Peak
- Trace mode = max hold

(2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

- RBW = 1 MHz
- VBW ≥ 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

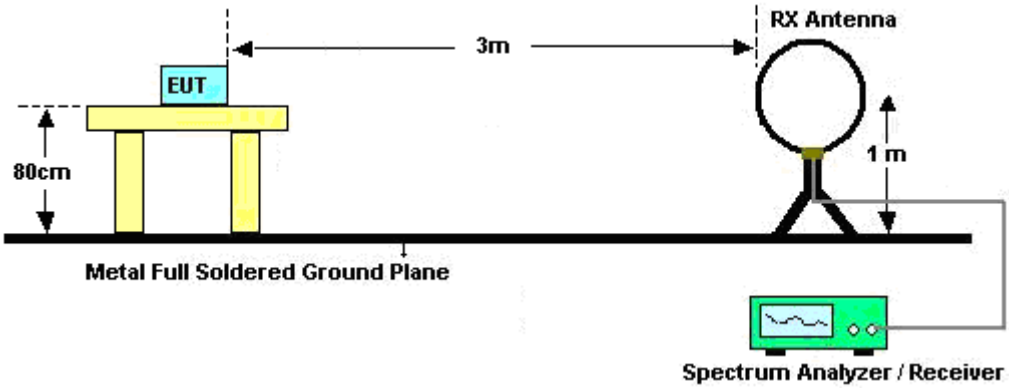
(3) Procedures for Average Unwanted Emissions Measurements Above 1000 MHz

- RBW = 1 MHz
- VBW = 10 Hz, when duty cycle is no less than 98 percent.
- VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

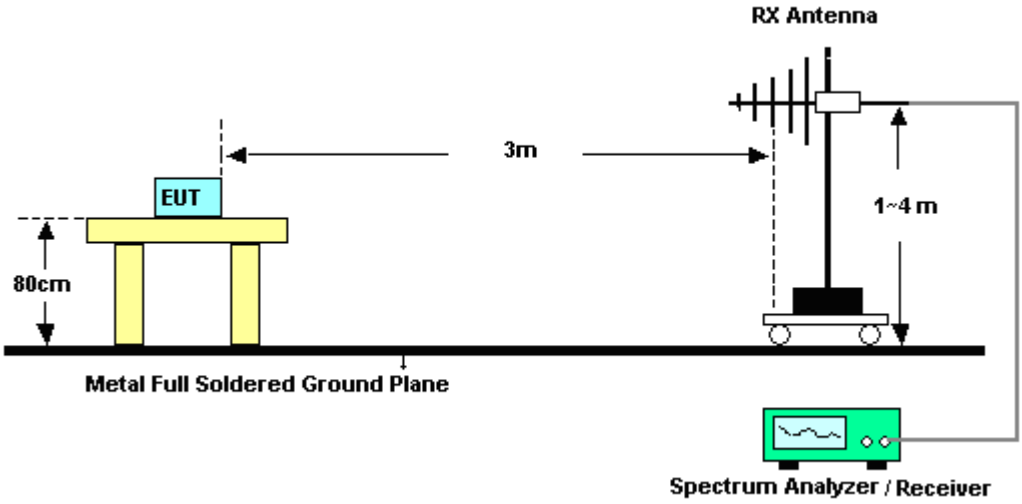
2. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the receiving antenna which is mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT is arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as "-".
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as "-".

3.4.4 Test Setup

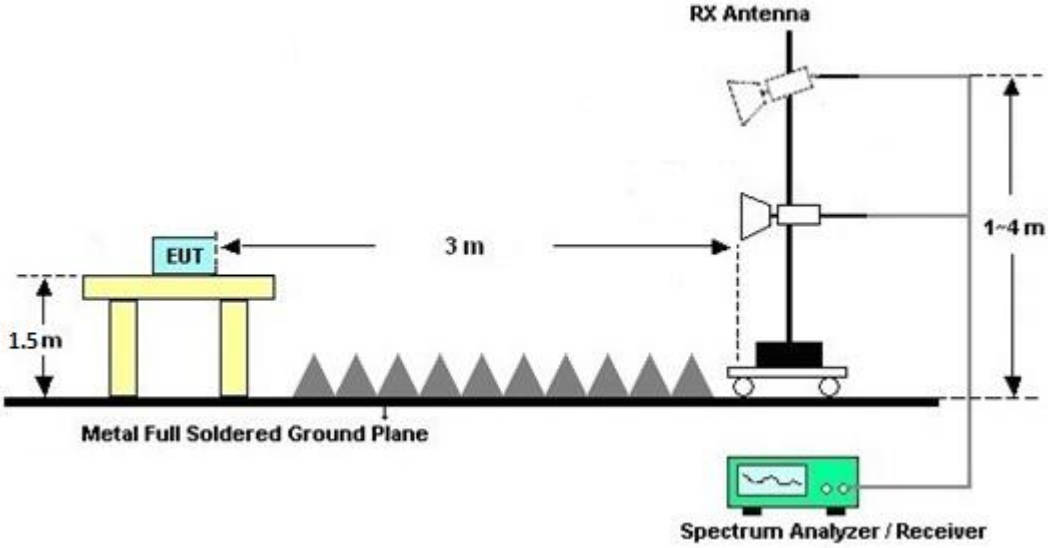
For radiated emissions below 30MHz



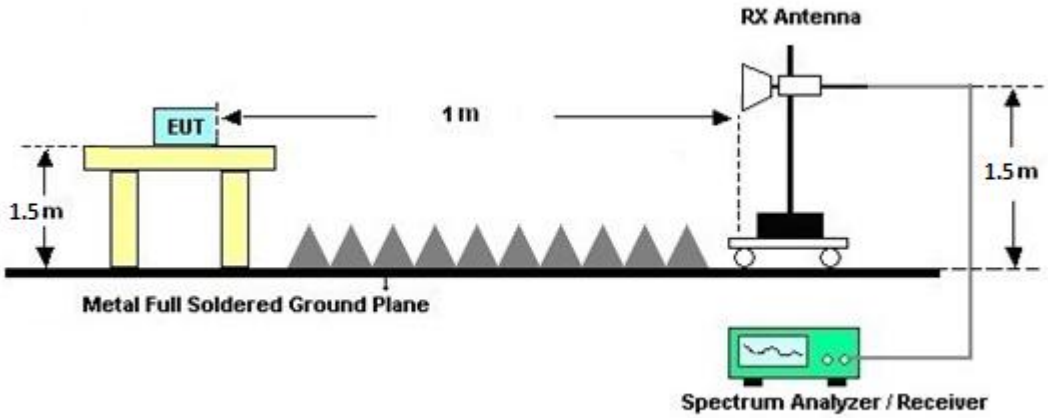
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



3.4.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which starts from 9 kHz to 30 MHz, is pre-scanned and the result which is 20 dB lower than the limit line is not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

3.4.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix C.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

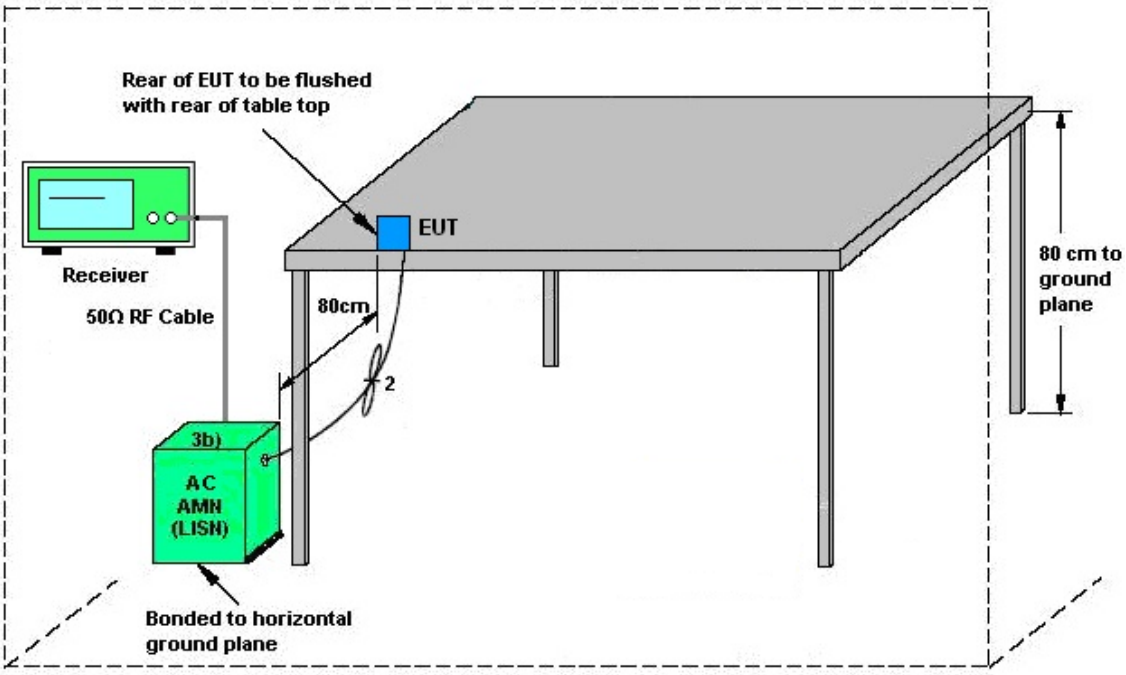
3.5.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.5.3 Test Procedures

1. The EUT is placed 0.4 meter away from the conducting wall of the shielding room, and is kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN shall be used.
6. Both Line and Neutral shall be tested in order to find out the maximum conducted emission.
7. The frequency range from 150 kHz to 30 MHz is scanned.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.5.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Antenna Requirements

3.6.1 Standard Applicable

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, 15.213, 15.217, 15.219, 15.221, or § 15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

3.6.2 Antenna Anti-Replacement Construction

Antenna permanently attached.

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	41912 & 05	30MHz~1GHz	Feb. 04, 2024	Dec. 19, 2024~ Jan. 20, 2025	Feb. 03, 2025	Radiation (03CH11-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Aug. 29, 2024	Dec. 19, 2024~ Jan. 20, 2025	Aug. 28, 2025	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-01620	1GHz~18GHz	Aug. 28, 2024	Dec. 19, 2024~ Jan. 20, 2025	Aug. 27, 2025	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1224	18GHz~40GHz	Jun. 24, 2024	Dec. 19, 2024~ Jan. 20, 2025	Jun. 23, 2025	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 07, 2024	Dec. 19, 2024~ Jan. 20, 2025	Dec. 06, 2025	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Mar. 25, 2024	Dec. 19, 2024~ Jan. 20, 2025	Mar. 24, 2025	Radiation (03CH11-HY)
Preamplifier	Jet-Power	JPA0118-55-303	1710001800055007	1GHz~18GHz	Jun. 13, 2024	Dec. 19, 2024~ Jan. 20, 2025	Jun. 12, 2025	Radiation (03CH11-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	May 27, 2024	Dec. 19, 2024~ Jan. 20, 2025	May 26, 2025	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 14, 2024	Dec. 19, 2024~ Jan. 20, 2025	Oct. 13, 2025	Radiation (03CH11-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY55420170	20MHz~8.4GHz	Jul. 19, 2024	Dec. 19, 2024~ Jan. 20, 2025	Jul. 18, 2025	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Dec. 19, 2024~ Jan. 20, 2025	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Dec. 19, 2024~ Jan. 20, 2025	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Dec. 19, 2024~ Jan. 20, 2025	N/A	Radiation (03CH11-HY)
Software	Audix	E3 6.2009-8-24	RK-001053	N/A	N/A	Dec. 19, 2024~ Jan. 20, 2025	N/A	Radiation (03CH11-HY)
Hygrometer	TECPEL	DTM-303B	TP140349	N/A	Aug. 29, 2024	Dec. 19, 2024~ Jan. 20, 2025	Aug. 28, 2025	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804013/2	30M~40G	May 23, 2024	Dec. 19, 2024~ Jan. 20, 2025	May 22, 2025	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30MHz~40GHz	Mar. 06, 2024	Dec. 19, 2024~ Jan. 20, 2025	Mar. 05, 2025	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9K~30M	Mar. 06, 2024	Dec. 19, 2024~ Jan. 20, 2025	Mar. 05, 2025	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	30M~40G	Mar. 06, 2024	Dec. 19, 2024~ Jan. 20, 2025	Mar. 05, 2025	Radiation (03CH11-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40SS	SN3	6.75GHz High Pass Filter	Sep. 10, 2024	Dec. 19, 2024~ Jan. 20, 2025	Sep. 09, 2025	Radiation (03CH11-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN11	1.53GHz Low Pass Filter	Sep. 10, 2024	Dec. 19, 2024~ Jan. 20, 2025	Sep. 09, 2025	Radiation (03CH11-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 01, 2024	Nov. 22, 2024~ Feb. 24, 2025	Oct. 31, 2025	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	17I00015SNO 36 (NO:35_144)	10MHz~6GHz	Aug. 20, 2024	Nov. 22, 2024~ Feb. 24, 2025	Aug. 19, 2025	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Aug. 23, 2024	Nov. 22, 2024~ Feb. 24, 2025	Aug. 22, 2025	Conducted (TH05-HY)
Switch Control Mainframe	Burgeon	ETF-058	EC1300484 (BOX3)	N/A	May 20, 2024	Nov. 22, 2024~ Feb. 24, 2025	May 19, 2025	Conducted (TH05-HY)
Software	Sporton	BTWIFI_Final_ version_240513	N/A	Conducted Other Test Item	N/A	Nov. 22, 2024~ Feb. 24, 2025	N/A	Conducted (TH05-HY)
AC Power Source	ACPOWER	AFC-11003G	F317040033	N/A	N/A	Dec. 25, 2024	N/A	Conduction (CO07-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Dec. 25, 2024	N/A	Conduction (CO07-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	9561-F N00373	9kHz-200MHz	Oct. 23, 2024	Dec. 25, 2024	Oct. 22, 2025	Conduction (CO07-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	Mar. 14, 2024	Dec. 25, 2024	Mar. 13, 2025	Conduction (CO07-HY)
Two-Line V-Network	TESEQ	NNB 51	45051	N/A	Mar. 10, 2024	Dec. 25, 2024	Mar. 09, 2025	Conduction (CO07-HY)
Four-Line V-Network	TESEQ	NNB 52	36122	N/A	Mar. 07, 2024	Dec. 25, 2024	Mar. 06, 2025	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Sep. 23, 2024	Dec. 25, 2024	Sep. 22, 2025	Conduction (CO07-HY)

5 Measurement Uncertainty

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.7 dB

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	6.4 dB

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1 dB

Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.3 dB

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.3 dB

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Benny Ku	Temperature:	21~25	°C
Test Date:	2024/11/22~2025/2/24	Relative Humidity:	51~54	%

<CDD Mode>

TEST RESULTS DATA
26dB and 99% OBW

U-NII-1 MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)			Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	36	5180	17.09	17.08	32.82	29.40	-		22.33		-	
11a	6Mbps	2	44	5220	20.63	20.38	38.72	37.49	-		23.01			
11a	6Mbps	2	48	5240	25.99	26.72	42.36	42.52	-		23.01			
VHT20	MCS0	2	36	5180	18.24	18.09	28.51	28.07	-		22.57			
VHT20	MCS0	2	44	5220	19.00	18.70	40.58	38.15	-		22.72			
VHT20	MCS0	2	48	5240	29.51	29.65	46.82	47.17	-		23.01			
VHT40	MCS0	2	38	5190	37.00	36.92	62.50	53.74	-		23.01			
VHT40	MCS0	2	46	5230	37.07	36.86	63.28	60.37	-		23.01			
VHT80	MCS0	2	42	5210	75.46	75.28	109.41	107.42	-		23.01			

TEST RESULTS DATA
Average Power Table

FCC U-NII-1 MIMO													
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	36	5180	18.99	18.89	21.95	30.00		3.27			Pass
11a	6Mbps	2	40	5200	20.88	20.69	23.80	30.00		3.27			Pass
11a	6Mbps	2	44	5220	22.68	22.67	25.69	30.00		3.27			Pass
11a	6Mbps	2	48	5240	23.21	23.48	26.36	30.00		3.27			Pass
HT20	MCS0	2	36	5180	18.35	18.31	21.34	30.00		3.27			Pass
HT20	MCS0	2	44	5220	21.34	21.28	24.32	30.00		3.27			Pass
HT20	MCS0	2	48	5240	22.71	22.91	25.82	30.00		3.27			Pass
HT40	MCS0	2	38	5190	17.52	17.37	20.46	30.00		3.27		-	Pass
HT40	MCS0	2	46	5230	19.28	19.20	22.25	30.00		3.27			Pass
VHT20	MCS0	2	36	5180	18.85	18.81	21.84	30.00		3.27			Pass
VHT20	MCS0	2	44	5220	21.84	21.78	24.82	30.00		3.27			Pass
VHT20	MCS0	2	48	5240	23.21	23.41	26.32	30.00		3.27			Pass
VHT40	MCS0	2	38	5190	17.72	17.57	20.66	30.00		3.27			Pass
VHT40	MCS0	2	46	5230	19.78	19.70	22.75	30.00		3.27			Pass
VHT80	MCS0	2	42	5210	14.74	14.51	17.64	30.00		3.27			Pass

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TEST RESULTS DATA
Power Spectral Density

FCC U-NII-1 MIMO															
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	36	5180	0.17	0.17	-		10.92	16.72		6.28		-	Pass
11a	6Mbps	2	40	5200	0.17	0.17			12.83	16.72		6.28			Pass
11a	6Mbps	2	44	5220	0.17	0.17			14.73	16.72		6.28			Pass
11a	6Mbps	2	48	5240	0.17	0.17			15.16	16.72		6.28			Pass
VHT20	MCS0	2	36	5180	0.18	0.18			10.72	16.72		6.28			Pass
VHT20	MCS0	2	44	5220	0.18	0.18			13.62	16.72		6.28			Pass
VHT20	MCS0	2	48	5240	0.18	0.18			14.66	16.72		6.28			Pass
VHT40	MCS0	2	38	5190	0.36	0.36			7.37	16.72		6.28			Pass
VHT40	MCS0	2	46	5230	0.36	0.36			9.32	16.72		6.28			Pass
VHT80	MCS0	2	42	5210	0.21	0.21			0.65	16.72		6.28			Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-2A MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	52	5260	16.85	16.63	23.98	20.97	23.21		29.21		23.98		-
11a	6Mbps	2	60	5300	17.28	17.19	31.16	30.90	23.35		29.35		23.98		
11a	6Mbps	2	64	5320	17.17	16.99	30.69	26.95	23.30		29.30		23.98		
VHT20	MCS0	2	52	5260	17.93	17.78	24.78	21.69	23.50		29.50		23.98		
VHT20	MCS0	2	60	5300	18.30	18.09	31.25	30.83	23.58		29.58		23.98		
VHT20	MCS0	2	64	5320	18.31	18.09	32.10	29.00	23.57		29.57		23.98		
VHT40	MCS0	2	54	5270	36.73	36.52	43.63	42.69	23.98		30.00		23.98		
VHT40	MCS0	2	62	5310	37.01	36.80	55.02	53.68	23.98		30.00		23.98		
VHT80	MCS0	2	58	5290	75.44	75.32	111.52	108.06	23.98		30.00		23.98		

TEST RESULTS DATA
Average Power Table

FCC U-NII-2A MIMO													
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	52	5260	18.49	18.29	21.40	23.98		2.60		30	Pass
11a	6Mbps	2	60	5300	18.33	18.24	21.30	23.98		2.60		30	Pass
11a	6Mbps	2	64	5320	18.24	18.21	21.24	23.98		2.60		30	Pass
HT20	MCS0	2	52	5260	18.34	18.43	21.40	23.98		2.60		30	Pass
HT20	MCS0	2	60	5300	18.18	18.29	21.25	23.98		2.60		30	Pass
HT20	MCS0	2	64	5320	18.14	18.28	21.22	23.98		2.60		30	Pass
HT40	MCS0	2	54	5270	18.18	18.16	21.18	23.98		2.60		30	Pass
HT40	MCS0	2	62	5310	14.34	14.46	17.41	23.98		2.60		30	Pass
VHT20	MCS0	2	52	5260	18.84	18.93	21.90	23.98		2.60		30	Pass
VHT20	MCS0	2	60	5300	18.68	18.79	21.75	23.98		2.60		30	Pass
VHT20	MCS0	2	64	5320	18.64	18.78	21.72	23.98		2.60		30	Pass
VHT40	MCS0	2	54	5270	18.68	18.66	21.68	23.98		2.60		30	Pass
VHT40	MCS0	2	62	5310	14.84	14.96	17.91	23.98		2.60		30	Pass
VHT80	MCS0	2	58	5290	14.03	13.88	16.97	23.98		2.60		30	Pass

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TEST RESULTS DATA
Power Spectral Density

U-NII-2A MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)				Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2			
11a	6Mbps	2	52	5260	0.17	0.17			10.33	11.00		5.61				Pass
11a	6Mbps	2	60	5300	0.17	0.17			10.40	11.00		5.61				Pass
11a	6Mbps	2	64	5320	0.17	0.17			10.42	11.00		5.61				Pass
VHT20	MCS0	2	52	5260	0.18	0.18			10.31	11.00		5.61				Pass
VHT20	MCS0	2	60	5300	0.18	0.18	-		10.53	11.00		5.61		-		Pass
VHT20	MCS0	2	64	5320	0.18	0.18			10.53	11.00		5.61				Pass
VHT40	MCS0	2	54	5270	0.36	0.36			7.90	11.00		5.61				Pass
VHT40	MCS0	2	62	5310	0.36	0.36			4.85	11.00		5.61				Pass
VHT80	MCS0	2	58	5290	0.21	0.21			-0.37	11.00		5.61				Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-2C MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	99% Bandwidth In U-NII 2C (MHz)		26 dB Bandwidth In U-NII 2C (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		6 dB Bandwidth for Straddle Channel (MHz)	
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2
11a	6Mbps	2	100	5500	17.08	16.92	26.82	26.54	23.28		29.28		23.98		----	----
11a	6Mbps	2	116	5580	16.71	16.62	21.46	21.66	23.21		29.21		23.98		----	----
11a	6Mbps	2	140	5700	16.96	16.88	27.89	25.96	23.27		29.27		23.98		----	----
VHT20	MCS0	2	100	5500	18.22	18.04	30.25	30.49	23.56		29.56		23.98		----	----
VHT20	MCS0	2	116	5580	17.94	17.78	24.24	21.71	23.50		29.50		23.98		----	----
VHT20	MCS0	2	140	5700	18.14	17.97	27.55	27.86	23.55		29.55		23.98		----	----
VHT40	MCS0	2	102	5510	36.99	36.82	54.22	59.55	23.98		30.00		23.98		----	----
VHT40	MCS0	2	110	5550	36.91	36.62	56.38	49.78	23.98		30.00		23.98		----	----
VHT40	MCS0	2	134	5670	37.75	37.26	69.18	62.93	23.98		30.00		23.98		----	----
VHT80	MCS0	2	106	5530	75.33	75.30	106.11	105.25	23.98		30.00		23.98		----	----
VHT80	MCS0	2	122	5610	75.15	75.17	80.29	81.86	23.98		30.00		23.98		----	----

U-NII-2C straddle channel MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	99% Bandwidth In U-NII 2C (MHz)		26 dB Bandwidth In U-NII 2C (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		6 dB Bandwidth for Straddle Channel (MHz)	
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2
11a	6Mbps	2	144	5720	13.41	13.36	15.70	15.67	23.22		29.22		23.98		3.095	3.13
VHT20	MCS0	2	144	5720	13.97	13.93	17.24	16.37	23.50		29.50		23.98		3.485	3.745
VHT40	MCS0	2	142	5710	33.57	33.50	47.34	45.50	23.98		30.00		23.98		2.532	2.514
VHT80	MCS0	2	138	5690	72.76	72.65	108.22	94.68	23.98		30.00		23.98		2.536	2.52

TEST RESULTS DATA
Average Power Table

FCC U-NII-2C MIMO													
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	100	5500	18.35	18.14	21.26	23.98		2.01		30	Pass
11a	6Mbps	2	116	5580	17.95	18.27	21.12	23.98		2.01		30	Pass
11a	6Mbps	2	140	5700	18.28	18.49	21.40	23.98		2.01		30	Pass
HT20	MCS0	2	100	5500	18.22	18.30	21.27	23.98		2.01		30	Pass
HT20	MCS0	2	116	5580	18.08	18.66	21.39	23.98		2.01		30	Pass
HT20	MCS0	2	140	5700	17.66	18.12	20.91	23.98		2.01		30	Pass
HT40	MCS0	2	102	5510	18.22	18.29	21.27	23.98		2.01		30	Pass
HT40	MCS0	2	110	5550	19.34	19.52	22.44	23.98		2.01		30	Pass
HT40	MCS0	2	134	5670	20.33	19.73	23.05	23.98		2.01		30	Pass
VHT20	MCS0	2	100	5500	18.72	18.80	21.77	23.98		2.01		30	Pass
VHT20	MCS0	2	116	5580	18.58	19.16	21.89	23.98		2.01		30	Pass
VHT20	MCS0	2	140	5700	17.76	18.22	21.01	23.98		2.01		30	Pass
VHT40	MCS0	2	102	5510	18.72	18.79	21.77	23.98		2.01		30	Pass
VHT40	MCS0	2	110	5550	19.84	20.02	22.94	23.98		2.01		30	Pass
VHT40	MCS0	2	134	5670	20.83	20.23	23.55	23.98		2.01		30	Pass
VHT80	MCS0	2	106	5530	16.07	15.89	18.99	23.98		2.01		30	Pass
VHT80	MCS0	2	122	5610	19.45	19.74	22.61	23.98		2.01		30	Pass

FCC U-NII-2C straddle channel MIMO													
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	144	5720	18.50	18.85	21.69	23.98		2.01		30	Pass
HT20	MCS0	2	144	5720	18.12	18.64	21.40	23.98		2.01		30	Pass
HT40	MCS0	2	142	5710	19.97	20.18	23.09	23.98		2.01		30	Pass
VHT20	MCS0	2	144	5720	18.22	18.74	21.50	23.98		2.01		30	Pass
VHT40	MCS0	2	142	5710	20.47	20.68	23.59	23.98		2.01		30	Pass
VHT80	MCS0	2	138	5690	21.11	20.25	23.71	23.98		2.01		30	Pass

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TEST RESULTS DATA
Power Spectral Density

U-NII-2C MIMO															
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	100	5500	0.17	0.17			10.26	11.00		5.02			Pass
11a	6Mbps	2	116	5580	0.17	0.17			9.70	11.00		5.02			Pass
11a	6Mbps	2	140	5700	0.17	0.17			10.15	11.00		5.02			Pass
VHT20	MCS0	2	100	5500	0.18	0.18			10.44	11.00		5.02			Pass
VHT20	MCS0	2	116	5580	0.18	0.18			10.48	11.00		5.02			Pass
VHT20	MCS0	2	140	5700	0.18	0.18	-		9.52	11.00		5.02		-	Pass
VHT40	MCS0	2	102	5510	0.36	0.36			8.51	11.00		5.02			Pass
VHT40	MCS0	2	110	5550	0.36	0.36			9.03	11.00		5.02			Pass
VHT40	MCS0	2	134	5670	0.36	0.36			9.61	11.00		5.02			Pass
VHT80	MCS0	2	106	5530	0.21	0.21			1.66	11.00		5.02			Pass
VHT80	MCS0	2	122	5610	0.21	0.21			5.23	11.00		5.02			Pass

U-NII-2C straddle channel MIMO															
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	144	5720	0.17	0.17			10.10	11.00		5.02			Pass
VHT20	MCS0	2	144	5720	0.18	0.18	-		9.81	11.00		5.02		-	Pass
VHT40	MCS0	2	142	5710	0.36	0.36			9.75	11.00		5.02			Pass
VHT80	MCS0	2	138	5690	0.21	0.21			6.07	11.00		5.02			Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-1 MIMO															
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)			Note
						Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	36	5180	Full	19.20	19.15	28.85	28.87	-		22.82		-	-
HE20	MCS0	2	44	5220	Full	19.44	19.46	39.51	35.94	-		22.89			
HE20	MCS0	2	48	5240	Full	31.10	32.37	50.48	51.60	-		23.01			
HE40	MCS0	2	38	5190	Full	38.08	38.00	51.78	51.92	-		23.01			
HE40	MCS0	2	46	5230	Full	38.00	37.97	44.35	46.53	-		23.01			
HE80	MCS0	2	42	5210	Full	77.08	77.01	88.00	86.75	-		23.01			

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TEST RESULTS DATA
Average Power Table

FCC U-NII-1 MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	36	5180	Full	18.43	18.16	21.31	30.00		3.27		-	Pass
HE20	MCS0	2	40	5200	Full	20.67	20.40	23.55	30.00		3.27			Pass
HE20	MCS0	2	44	5220	Full	22.06	21.80	24.94	30.00		3.27			Pass
HE20	MCS0	2	48	5240	Full	23.80	23.77	26.80	30.00		3.27			Pass
HE40	MCS0	2	38	5190	Full	17.69	17.42	20.57	30.00		3.27			Pass
HE40	MCS0	2	46	5230	Full	19.27	19.03	22.16	30.00		3.27			Pass
HE80	MCS0	2	42	5210	Full	15.60	15.36	18.49	30.00		3.27			Pass

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TEST RESULTS DATA
Power Spectral Density

FCC U-NII-1 MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
						Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	36	5180	Full	0.12	0.12			9.59	16.72		6.28			Pass
HE20	MCS0	2	40	5200	Full	0.12	0.12			11.95	16.72		6.28			Pass
HE20	MCS0	2	44	5220	Full	0.12	0.12			13.59	16.72		6.28			Pass
HE20	MCS0	2	48	5240	Full	0.12	0.12	-		15.42	16.72		6.28		-	Pass
HE40	MCS0	2	38	5190	Full	0.25	0.24			6.27	16.72		6.28			Pass
HE40	MCS0	2	46	5230	Full	0.25	0.24			7.77	16.72		6.28			Pass
HE80	MCS0	2	42	5210	Full	0.25	0.25			1.42	16.72		6.28			Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-2A MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		Note
						Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
HE20	MCS0	2	52	5260	Full	19.06	19.05	22.86	22.18	23.80		29.80		23.98		
HE20	MCS0	2	60	5300	Full	19.22	19.22	30.90	28.92	23.84		29.84		23.98		
HE20	MCS0	2	64	5320	Full	19.17	19.18	27.56	28.09	23.83		29.83		23.98		
HE40	MCS0	2	54	5270	Full	37.86	37.81	40.53	40.42	23.98		30.00		23.98		
HE40	MCS0	2	62	5310	Full	38.14	38.02	55.70	56.43	23.98		30.00		23.98		
HE80	MCS0	2	58	5290	Full	77.16	76.98	84.74	82.50	23.98		30.00		23.98		

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TEST RESULTS DATA
Average Power Table

FCC U-NII-2A MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	52	5260	Full	18.97	18.78	21.89	23.98		2.60		30	Pass
HE20	MCS0	2	60	5300	Full	19.11	18.91	22.02	23.98		2.60		30	Pass
HE20	MCS0	2	64	5320	Full	18.05	17.84	20.96	23.98		2.60		30	Pass
HE40	MCS0	2	54	5270	Full	19.10	18.88	22.00	23.98		2.60		30	Pass
HE40	MCS0	2	62	5310	Full	16.96	16.78	19.88	23.98		2.60		30	Pass
HE80	MCS0	2	58	5290	Full	13.42	13.19	16.32	23.98		2.60		30	Pass

TEST RESULTS DATA
Power Spectral Density

U-NII-2A MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
						Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	52	5260	Full	0.12	0.12	-		9.92	11.00		5.61		-	Pass
HE20	MCS0	2	60	5300	Full	0.12	0.12			10.39	11.00		5.61			Pass
HE20	MCS0	2	64	5320	Full	0.12	0.12			9.50	11.00		5.61			Pass
HE40	MCS0	2	54	5270	Full	0.25	0.24			7.22	11.00		5.61			Pass
HE40	MCS0	2	62	5310	Full	0.25	0.24			5.87	11.00		5.61			Pass
HE80	MCS0	2	58	5290	Full	0.25	0.25			-1.10	11.00		5.61			Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-2C MIMO																	
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	99% Bandwidth In U-NII 2C (MHz)		26 dB Bandwidth In U-NII 2C (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		6 dB Bandwidth for Straddle Channel (MHz)	
						Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2
HE20	MCS0	2	100	5500	Full	19.20	19.20	29.23	31.42	23.83		29.83		23.98		----	----
HE20	MCS0	2	116	5580	Full	19.08	19.05	22.59	22.58	23.80		29.80		23.98		----	----
HE20	MCS0	2	140	5700	Full	19.18	19.22	26.01	27.25	23.83		29.83		23.98		----	----
HE40	MCS0	2	102	5510	Full	38.07	38.03	51.76	53.39	23.98		30.00		23.98		----	----
HE40	MCS0	2	110	5550	Full	38.16	38.05	46.99	49.79	23.98		30.00		23.98		----	----
HE40	MCS0	2	134	5670	Full	38.31	38.22	62.11	58.06	23.98		30.00		23.98		----	----
HE80	MCS0	2	106	5530	Full	77.02	77.04	89.86	89.50	23.98		30.00		23.98		----	----
HE80	MCS0	2	122	5610	Full	76.97	76.85	80.10	80.26	23.98		30.00		23.98		----	----

U-NII-2C straddle channel MIMO																	
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	99% Bandwidth In U-NII 2C (MHz)		26 dB Bandwidth In U-NII 2C (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		6 dB Bandwidth for Straddle Channel (MHz)	
						Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2
HE20	MCS0	2	144	5720	Full	14.56	14.56	16.29	16.39	23.80		29.80		23.98		4.27	4.39
HE40	MCS0	2	142	5710	Full	34.06	34.06	40.86	41.54	23.98		30.00		23.98		2.532	2.514
HE80	MCS0	2	138	5690	Full	73.62	73.47	79.86	75.22	23.98		30.00		23.98		3.464	2.536

TEST RESULTS DATA
Average Power Table

FCC U-NII-2C MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	100	5500	Full	19.18	18.84	22.02	23.98		2.01		30	Pass
HE20	MCS0	2	116	5580	Full	18.75	19.14	21.96	23.98		2.01		30	Pass
HE20	MCS0	2	140	5700	Full	19.09	19.24	22.18	23.98		2.01		30	Pass
HE40	MCS0	2	102	5510	Full	19.35	19.01	22.19	23.98		2.01		30	Pass
HE40	MCS0	2	110	5550	Full	20.74	20.60	23.68	23.98		2.01		30	Pass
HE40	MCS0	2	134	5670	Full	20.57	19.61	23.13	23.98		2.01		30	Pass
HE80	MCS0	2	106	5530	Full	16.27	16.12	19.21	23.98		2.01		30	Pass
HE80	MCS0	2	122	5610	Full	19.34	19.41	22.39	23.98		2.01		30	Pass

FCC U-NII-2C straddle channel MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	144	5720	Full	19.37	19.50	22.45	23.98		2.01		30	Pass
HE40	MCS0	2	142	5710	Full	20.65	20.47	23.57	23.98		2.01		30	Pass
HE80	MCS0	2	138	5690	Full	21.18	20.45	23.84	23.98		2.01		30	Pass

TEST RESULTS DATA
Power Spectral Density

U-NII-2C MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
						Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	100	5500	Full	0.12	0.12	-		9.54	11.00		5.02		-	Pass
HE20	MCS0	2	116	5580	Full	0.12	0.12			9.13	11.00		5.02			Pass
HE20	MCS0	2	140	5700	Full	0.12	0.12			8.97	11.00		5.02			Pass
HE40	MCS0	2	102	5510	Full	0.25	0.24			8.02	11.00		5.02			Pass
HE40	MCS0	2	110	5550	Full	0.25	0.24			9.02	11.00		5.02			Pass
HE40	MCS0	2	134	5670	Full	0.25	0.24			8.01	11.00		5.02			Pass
HE80	MCS0	2	106	5530	Full	0.25	0.25			1.97	11.00		5.02			Pass
HE80	MCS0	2	122	5610	Full	0.25	0.25			5.08	11.00		5.02			Pass

U-NII-2C straddle channel MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
						Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	144	5720	Full	0.12	0.12	-		9.56	11.00		5.02		-	Pass
HE40	MCS0	2	142	5710	Full	0.25	0.24			8.77	11.00		5.02			Pass
HE80	MCS0	2	138	5690	Full	0.25	0.25			6.42	11.00		5.02			Pass

<TXBF Mode>

TEST RESULTS DATA
Average Power Table

FCC U-NII-1 MIMO													
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HT20	MCS0	2	36	5180	18.25	18.21	21.24	29.72		6.28		-	Pass
HT20	MCS0	2	44	5220	21.24	21.18	24.22	29.72		6.28			Pass
HT20	MCS0	2	48	5240	22.61	22.81	25.72	29.72		6.28			Pass
HT40	MCS0	2	38	5190	17.42	17.27	20.36	29.72		6.28			Pass
HT40	MCS0	2	46	5230	19.18	19.10	22.15	29.72		6.28			Pass
VHT20	MCS0	2	36	5180	18.75	18.71	21.74	29.72		6.28			Pass
VHT20	MCS0	2	44	5220	21.74	21.68	24.72	29.72		6.28			Pass
VHT20	MCS0	2	48	5240	23.11	23.31	26.22	29.72		6.28			Pass
VHT40	MCS0	2	38	5190	17.62	17.47	20.56	29.72		6.28			Pass
VHT40	MCS0	2	46	5230	19.68	19.60	22.65	29.72		6.28			Pass
VHT80	MCS0	2	42	5210	14.64	14.41	17.54	29.72		6.28			Pass

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TEST RESULTS DATA
Average Power Table

FCC U-NII-2A MIMO													
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HT20	MCS0	2	52	5260	18.24	18.33	21.30	23.98		5.61		30	Pass
HT20	MCS0	2	60	5300	18.08	18.19	21.15	23.98		5.61		30	Pass
HT20	MCS0	2	64	5320	18.04	18.18	21.12	23.98		5.61		30	Pass
HT40	MCS0	2	54	5270	18.08	18.06	21.08	23.98		5.61		30	Pass
HT40	MCS0	2	62	5310	14.24	14.36	17.31	23.98		5.61		30	Pass
VHT20	MCS0	2	52	5260	18.74	18.83	21.80	23.98		5.61		30	Pass
VHT20	MCS0	2	60	5300	18.58	18.69	21.65	23.98		5.61		30	Pass
VHT20	MCS0	2	64	5320	18.54	18.68	21.62	23.98		5.61		30	Pass
VHT40	MCS0	2	54	5270	18.58	18.56	21.58	23.98		5.61		30	Pass
VHT40	MCS0	2	62	5310	14.74	14.86	17.81	23.98		5.61		30	Pass
VHT80	MCS0	2	58	5290	13.93	13.78	16.87	23.98		5.61		30	Pass

TEST RESULTS DATA
Average Power Table

FCC U-NII-2C MIMO													
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HT20	MCS0	2	100	5500	18.12	18.20	21.17	23.98		5.02		30	Pass
HT20	MCS0	2	116	5580	17.98	18.56	21.29	23.98		5.02		30	Pass
HT20	MCS0	2	140	5700	17.56	18.02	20.81	23.98		5.02		30	Pass
HT40	MCS0	2	102	5510	18.12	18.19	21.17	23.98		5.02		30	Pass
HT40	MCS0	2	110	5550	19.24	19.42	22.34	23.98		5.02		30	Pass
HT40	MCS0	2	134	5670	20.23	19.63	22.95	23.98		5.02		30	Pass
VHT20	MCS0	2	100	5500	18.62	18.70	21.67	23.98		5.02		30	Pass
VHT20	MCS0	2	116	5580	18.48	19.06	21.79	23.98		5.02		30	Pass
VHT20	MCS0	2	140	5700	17.66	18.12	20.91	23.98		5.02		30	Pass
VHT40	MCS0	2	102	5510	18.62	18.69	21.67	23.98		5.02		30	Pass
VHT40	MCS0	2	110	5550	19.74	19.92	22.84	23.98		5.02		30	Pass
VHT40	MCS0	2	134	5670	20.73	20.13	23.45	23.98		5.02		30	Pass
VHT80	MCS0	2	106	5530	15.97	15.79	18.89	23.98		5.02		30	Pass
VHT80	MCS0	2	122	5610	19.35	19.64	22.51	23.98		5.02		30	Pass

FCC U-NII-2C straddle channel MIMO													
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HT20	MCS0	2	144	5720	18.02	18.54	21.30	23.98		5.02		30	Pass
HT40	MCS0	2	142	5710	19.87	20.08	22.99	23.98		5.02		30	Pass
VHT20	MCS0	2	144	5720	18.12	18.64	21.40	23.98		5.02		30	Pass
VHT40	MCS0	2	142	5710	20.37	20.58	23.49	23.98		5.02		30	Pass
VHT80	MCS0	2	138	5690	21.01	20.15	23.61	23.98		5.02		30	Pass

Report Number : FR4N1307C

TEST RESULTS DATA
Average Power Table

FCC U-NII-1 MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	36	5180	Full	18.33	18.06	21.21	29.72		6.28		-	Pass
HE20	MCS0	2	40	5200	Full	20.57	20.30	23.45	29.72		6.28			Pass
HE20	MCS0	2	44	5220	Full	21.96	21.70	24.84	29.72		6.28			Pass
HE20	MCS0	2	48	5240	Full	23.70	23.67	26.70	29.72		6.28			Pass
HE40	MCS0	2	38	5190	Full	17.59	17.32	20.47	29.72		6.28			Pass
HE40	MCS0	2	46	5230	Full	19.17	18.93	22.06	29.72		6.28			Pass
HE80	MCS0	2	42	5210	Full	15.50	15.26	18.39	29.72		6.28			Pass

Report Number : FR4N1307C

TEST RESULTS DATA
Average Power Table

FCC U-NII-2A MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	52	5260	Full	18.87	18.68	21.79	23.98		5.61		30	Pass
HE20	MCS0	2	60	5300	Full	19.01	18.81	21.92	23.98		5.61		30	Pass
HE20	MCS0	2	64	5320	Full	17.95	17.74	20.86	23.98		5.61		30	Pass
HE40	MCS0	2	54	5270	Full	19.00	18.78	21.90	23.98		5.61		30	Pass
HE40	MCS0	2	62	5310	Full	16.86	16.68	19.78	23.98		5.61		30	Pass
HE80	MCS0	2	58	5290	Full	13.32	13.09	16.22	23.98		5.61		30	Pass

TEST RESULTS DATA
Average Power Table

FCC U-NII-2C MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	100	5500	Full	19.08	18.74	21.92	23.98		5.02		30	Pass
HE20	MCS0	2	116	5580	Full	18.65	19.04	21.86	23.98		5.02		30	Pass
HE20	MCS0	2	140	5700	Full	18.99	19.14	22.08	23.98		5.02		30	Pass
HE40	MCS0	2	102	5510	Full	19.25	18.91	22.09	23.98		5.02		30	Pass
HE40	MCS0	2	110	5550	Full	20.64	20.50	23.58	23.98		5.02		30	Pass
HE40	MCS0	2	134	5670	Full	20.47	19.51	23.03	23.98		5.02		30	Pass
HE80	MCS0	2	106	5530	Full	16.17	16.02	19.11	23.98		5.02		30	Pass
HE80	MCS0	2	122	5610	Full	19.24	19.31	22.29	23.98		5.02		30	Pass

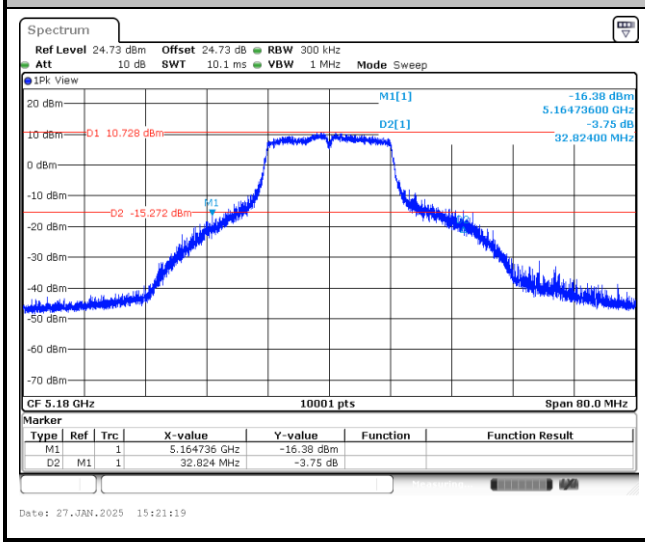
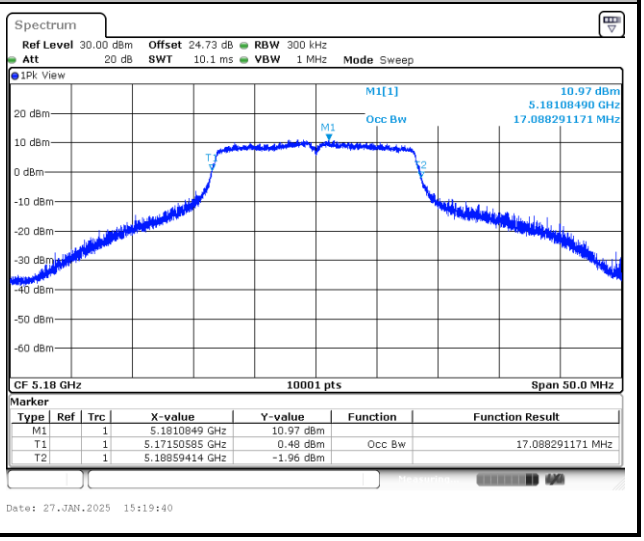
FCC U-NII-2C straddle channel MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	144	5720	Full	19.27	19.40	22.35	23.98		5.02		30	Pass
HE40	MCS0	2	142	5710	Full	20.55	20.37	23.47	23.98		5.02		30	Pass
HE80	MCS0	2	138	5690	Full	21.08	20.35	23.74	23.98		5.02		30	Pass

<CDD Mode>

Test Result of 26dB & 99% Occupied Bandwidth

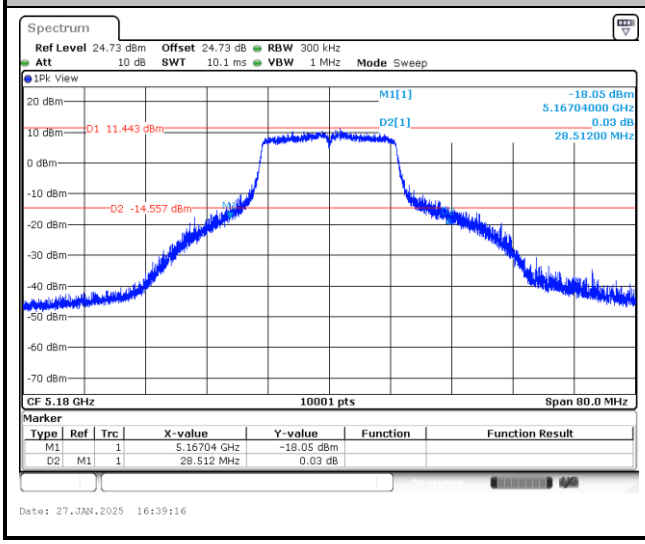
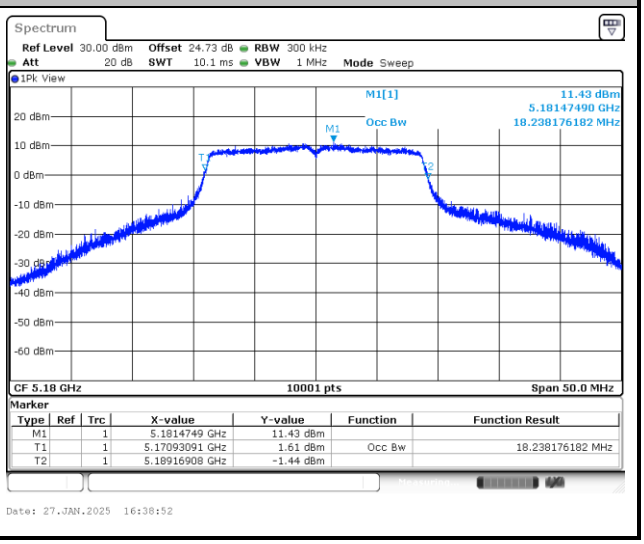
MIMO <Ant. 1+2>

<802.11a>

26dB Bandwidth	99% Occupied Bandwidth
	

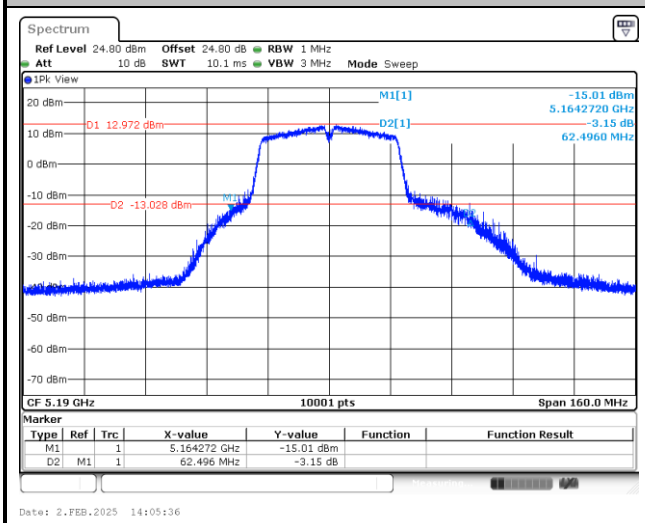
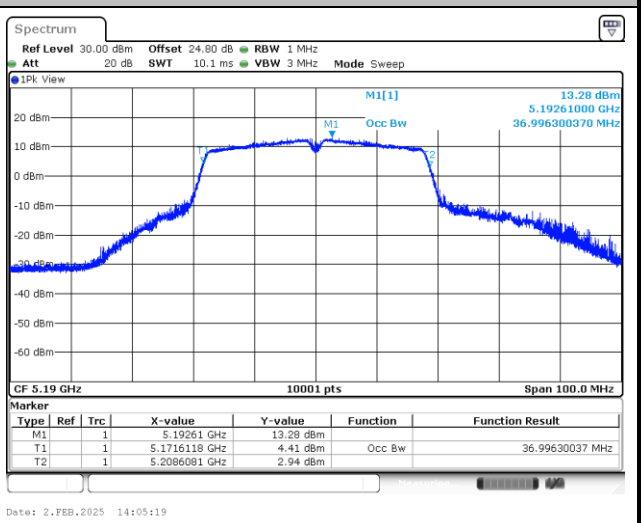
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ac VHT20>

26dB Bandwidth	99% Occupied Bandwidth
	

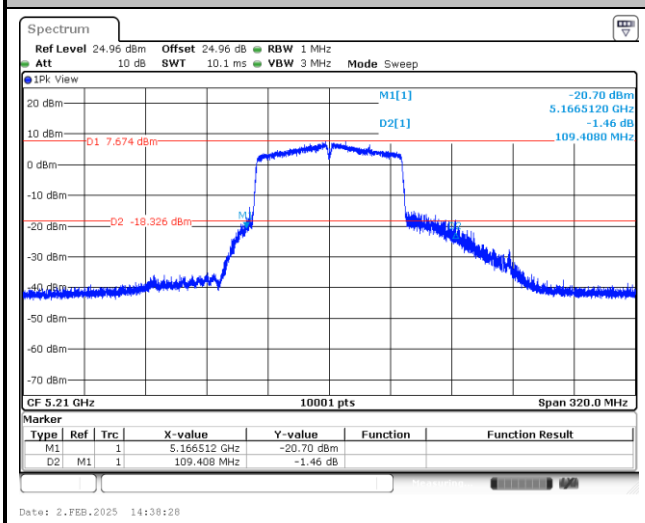
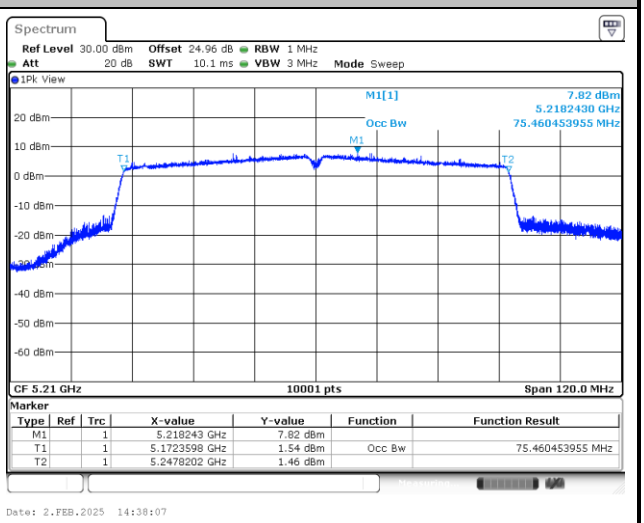
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ac VHT40>

26dB Bandwidth	99% Occupied Bandwidth
	

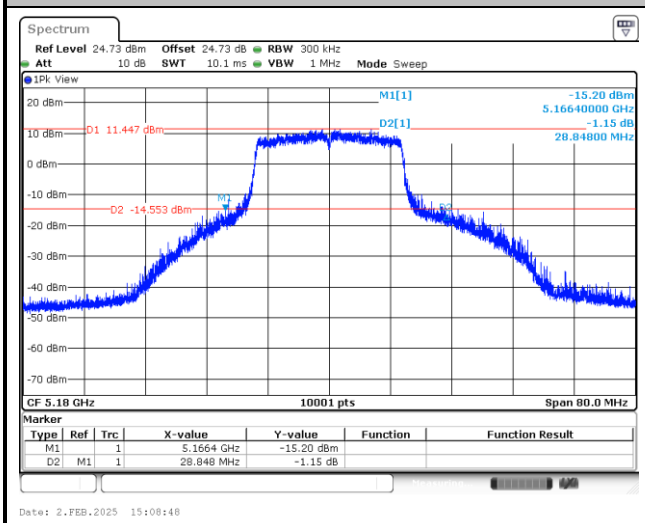
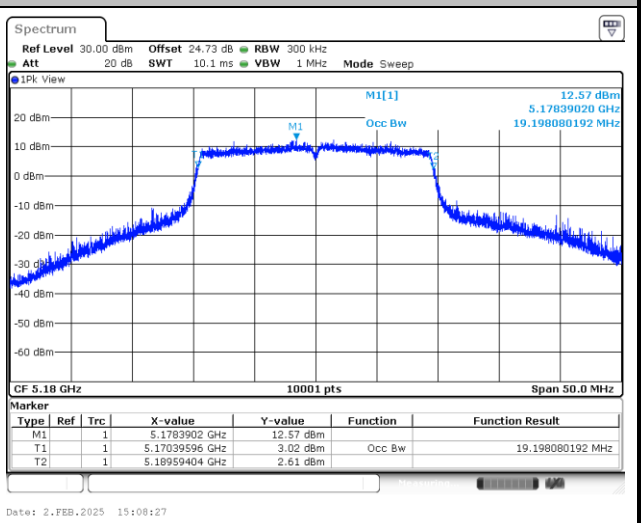
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ac VHT80>

26dB Bandwidth	99% Occupied Bandwidth
	

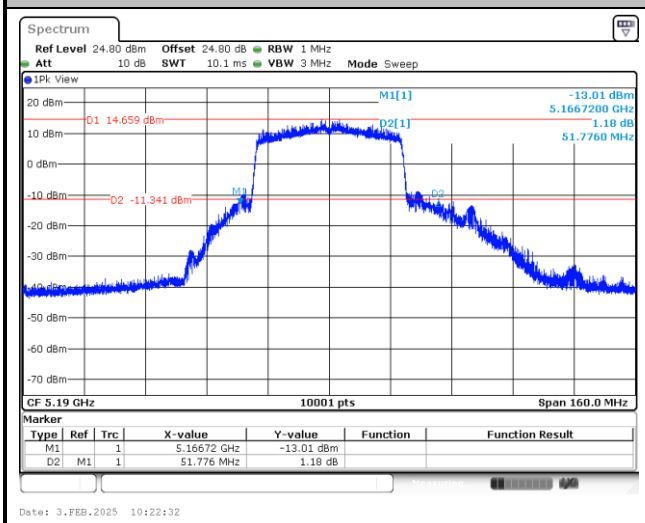
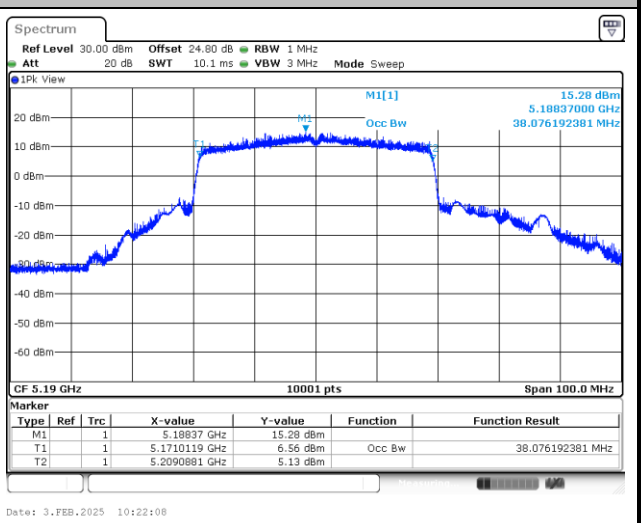
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ax HE20>

26dB Bandwidth	99% Occupied Bandwidth
	

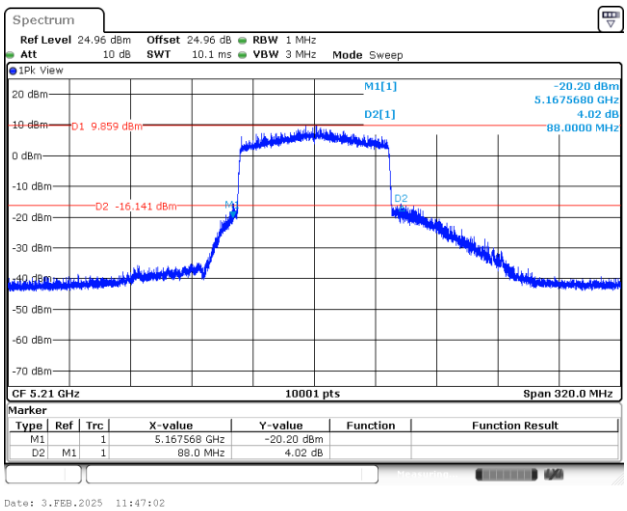
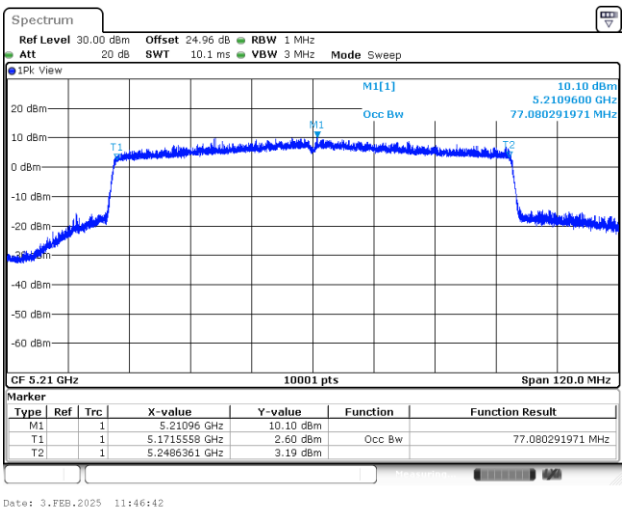
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ax HE40>

26dB Bandwidth	99% Occupied Bandwidth
	

Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

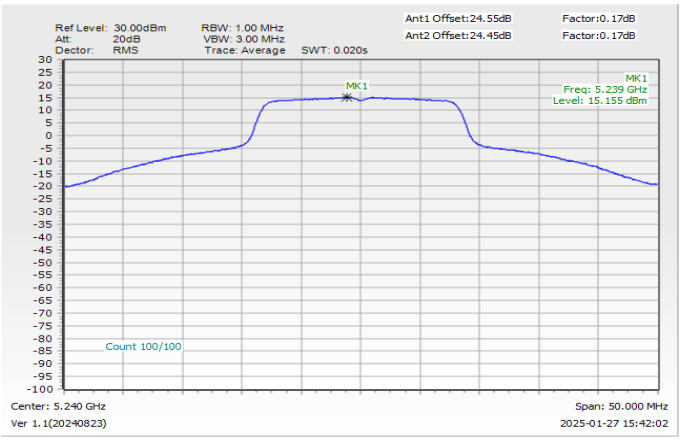
<802.11ax HE80>

26dB Bandwidth	99% Occupied Bandwidth
	

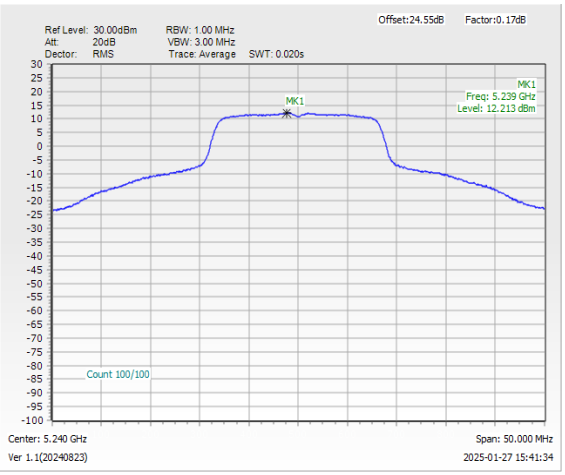
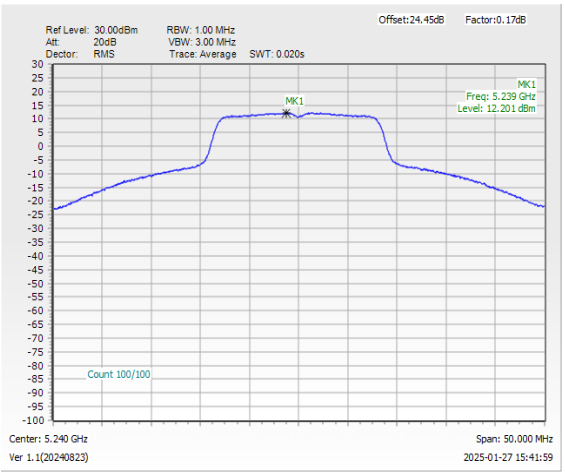
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

Test Result of Power Spectral Density

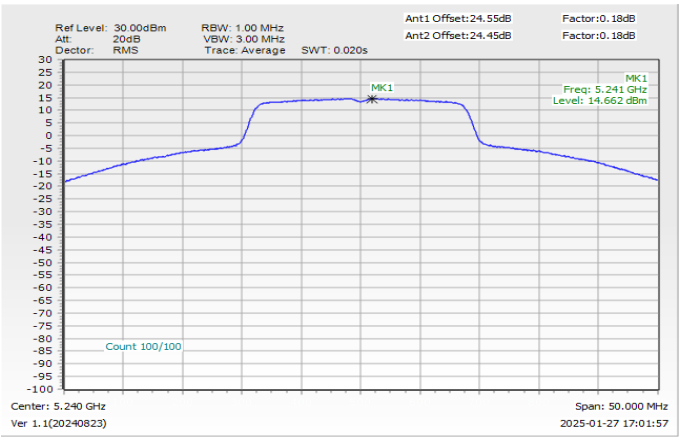
<802.11a>

Maximum Power Density Plot (dBm/MHz)


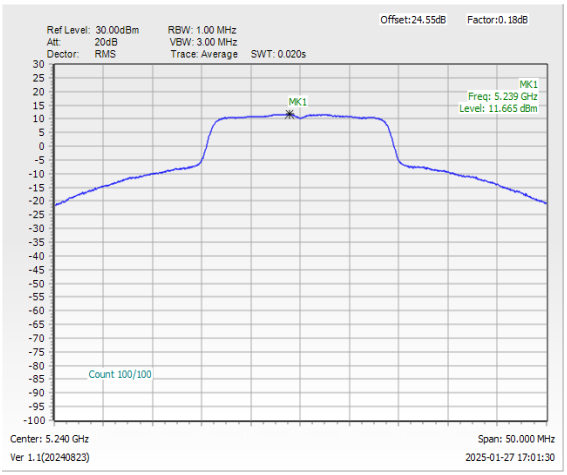
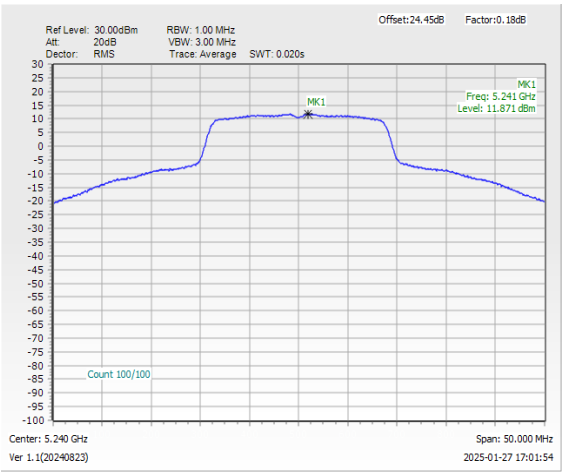
Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

Maximum Power Density Plot Trace 1 (Ant 1)	Maximum Power Density Plot Trace 2 (Ant 2)
	

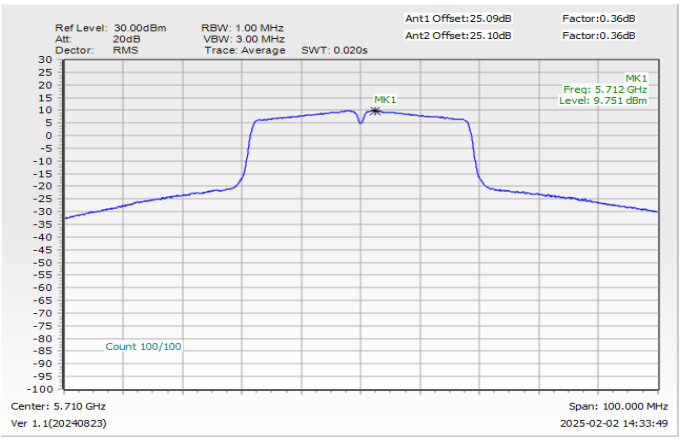
<802.11ac VHT20>

Maximum Power Density Plot (dBm/MHz)


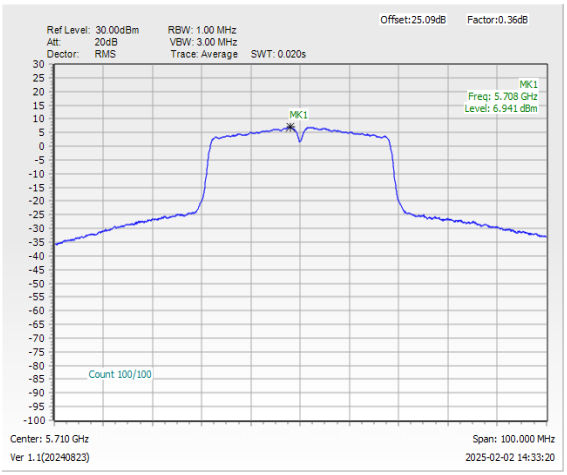
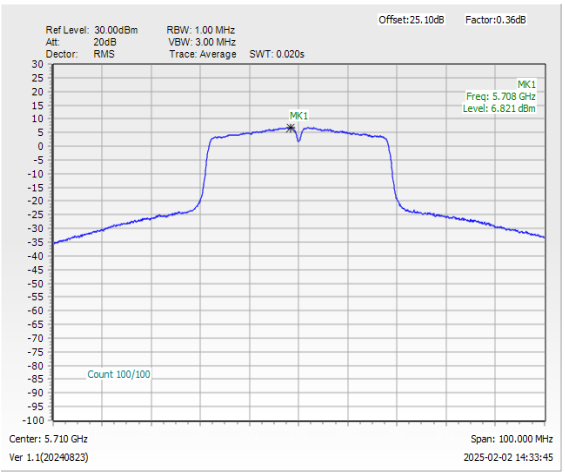
Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

Maximum Power Density Plot Trace 1 (Ant 1)	Maximum Power Density Plot Trace 2 (Ant 2)
	

<802.11ac VHT40>

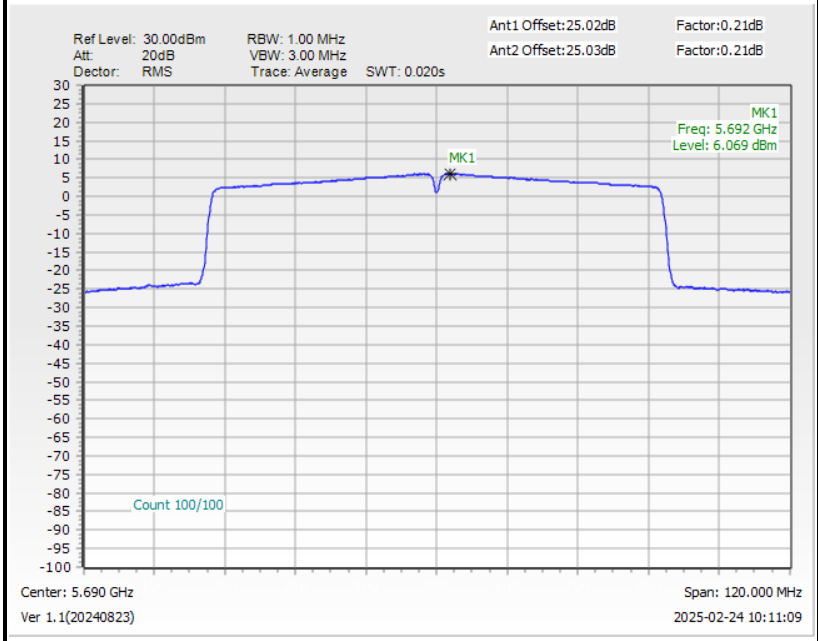
Maximum Power Density Plot (dBm/MHz)


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

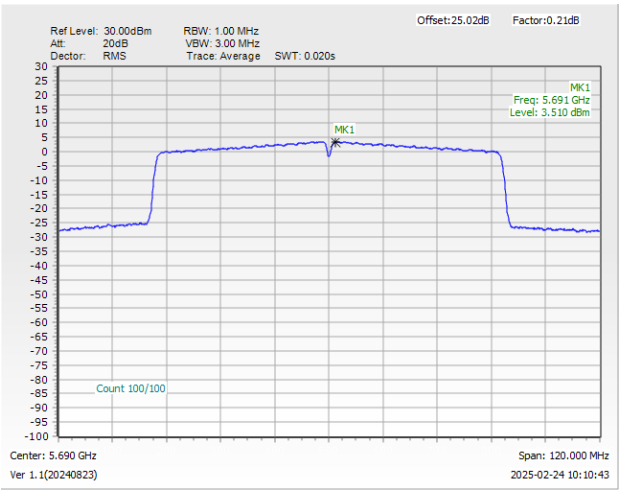
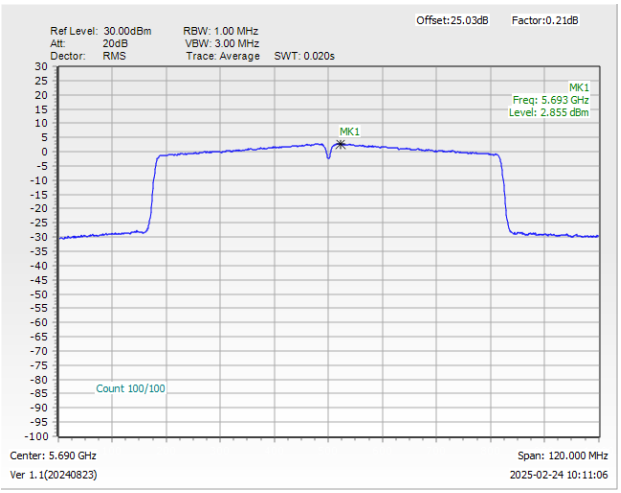
Maximum Power Density Plot Trace 1 (Ant 1)	Maximum Power Density Plot Trace 2 (Ant 2)
	

<802.11ac VHT80>

Maximum Power Density Plot (dBm/MHz)

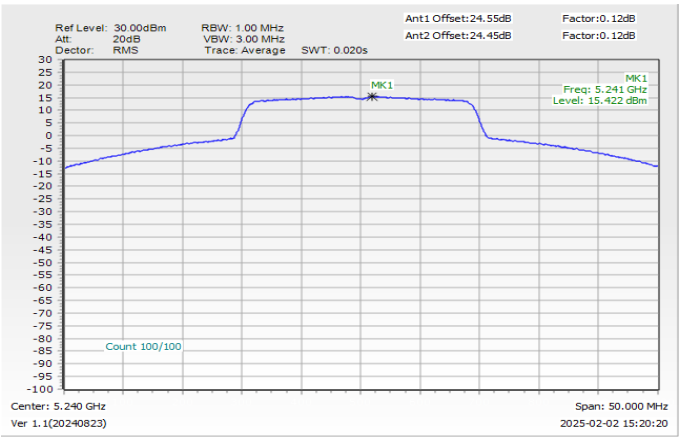


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

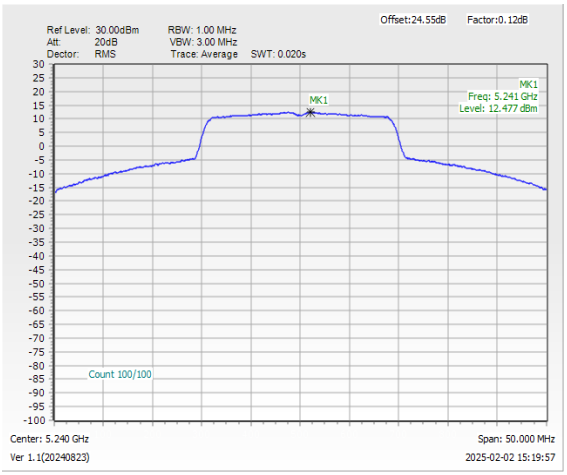
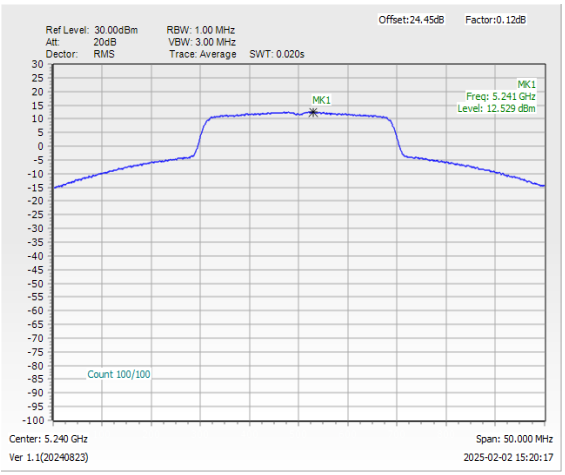
Maximum Power Density Plot Trace 1 (Ant 1)	Maximum Power Density Plot Trace 2 (Ant 2)
	

<802.11ax HE20>

Maximum Power Density Plot (dBm/MHz)

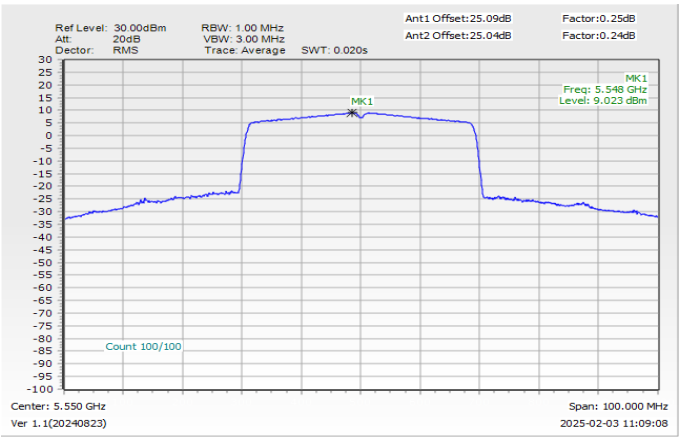


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

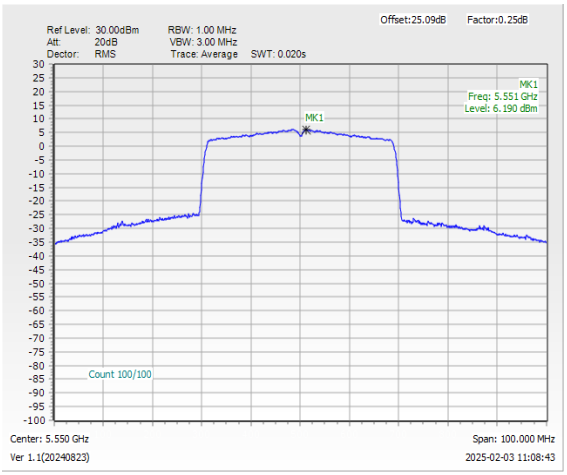
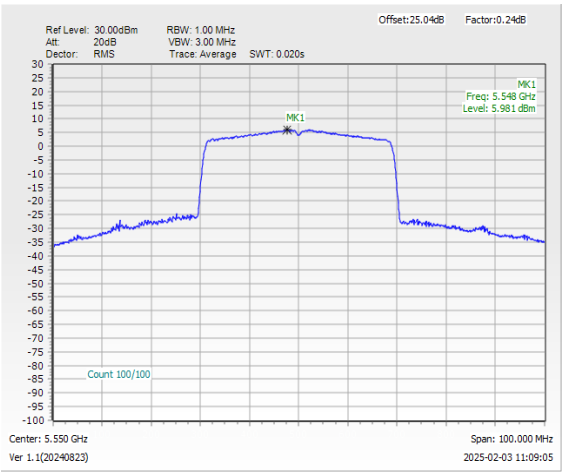
Maximum Power Density Plot Trace 1 (Ant 1)	Maximum Power Density Plot Trace 2 (Ant 2)
	

<802.11ax HE40>

Maximum Power Density Plot (dBm/MHz)

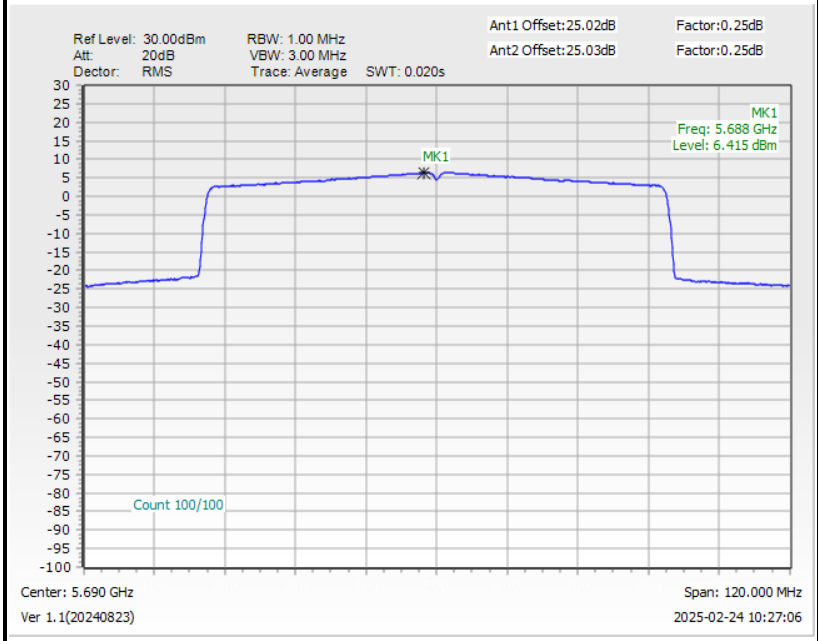


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

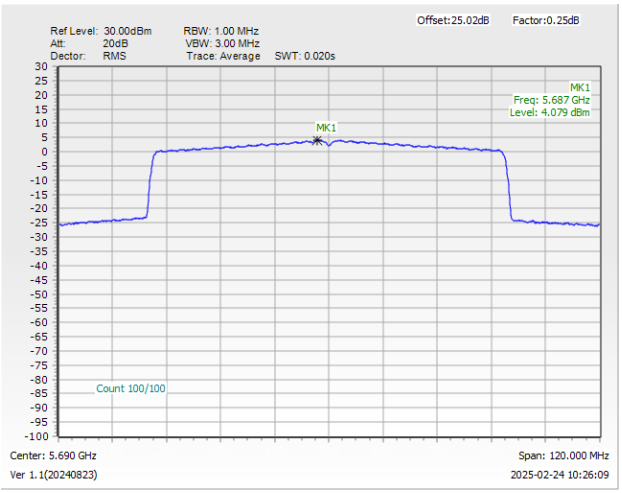
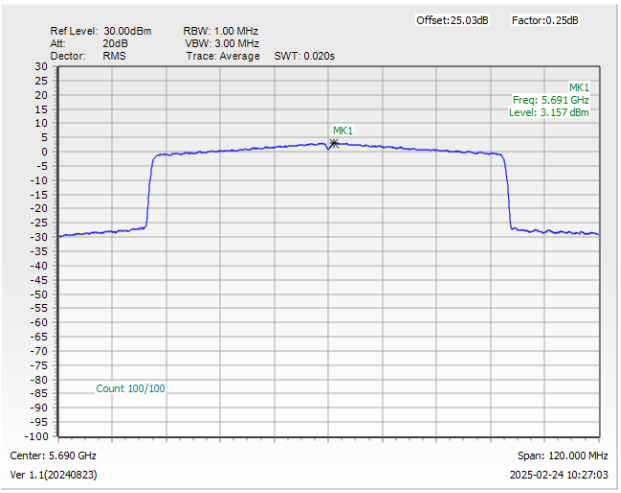
Maximum Power Density Plot Trace 1 (Ant 1)	Maximum Power Density Plot Trace 2 (Ant 2)
	

<802.11ax HE80>

Maximum Power Density Plot (dBm/MHz)



Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

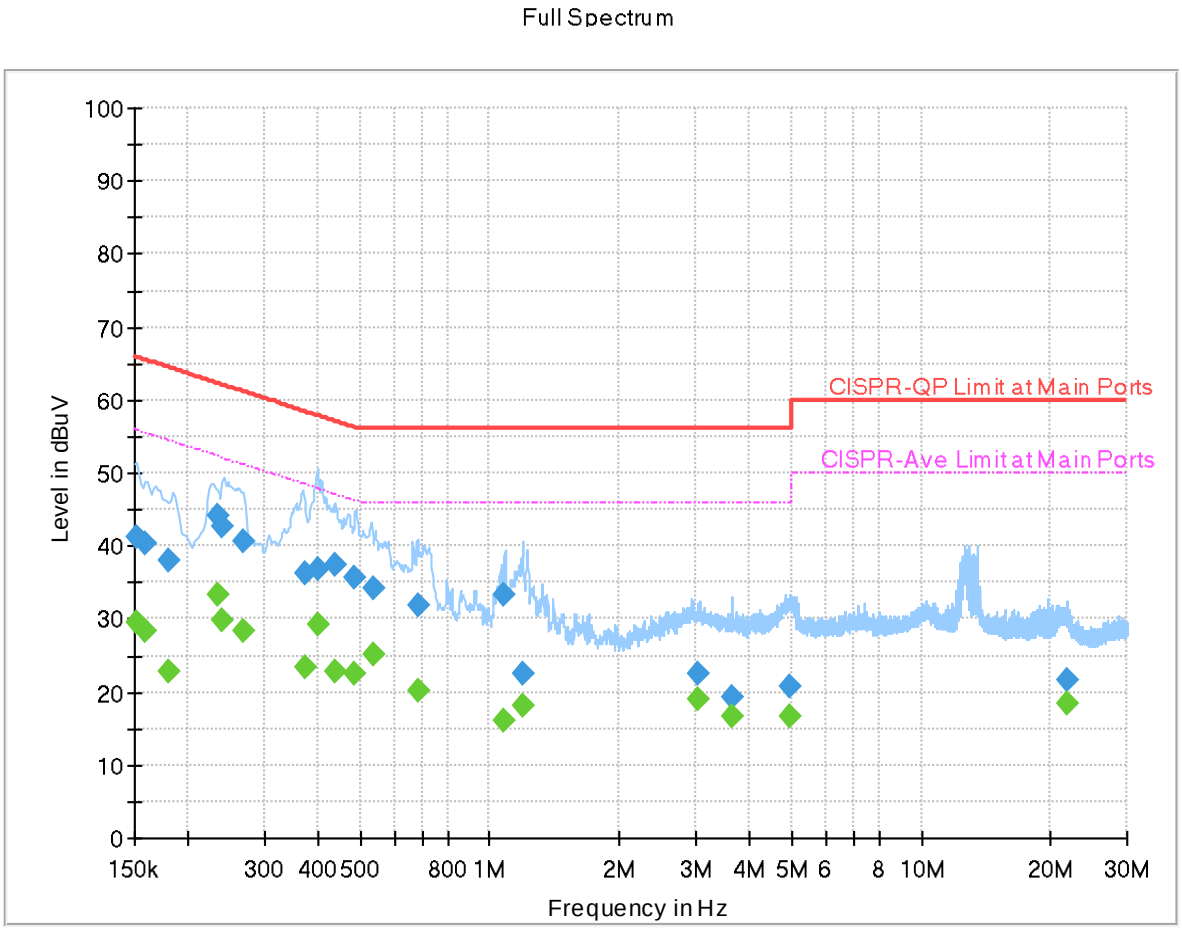
Maximum Power Density Plot Trace 1 (Ant 1)	Maximum Power Density Plot Trace 2 (Ant 2)
	

Appendix B. AC Conducted Emission Test Results

Test Engineer :	Louis Chung	**Temperature :**	20.2~23.4℃
		Relative Humidity :	42.7~49.1%

EUT Information

Report NO :	4N1307
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line



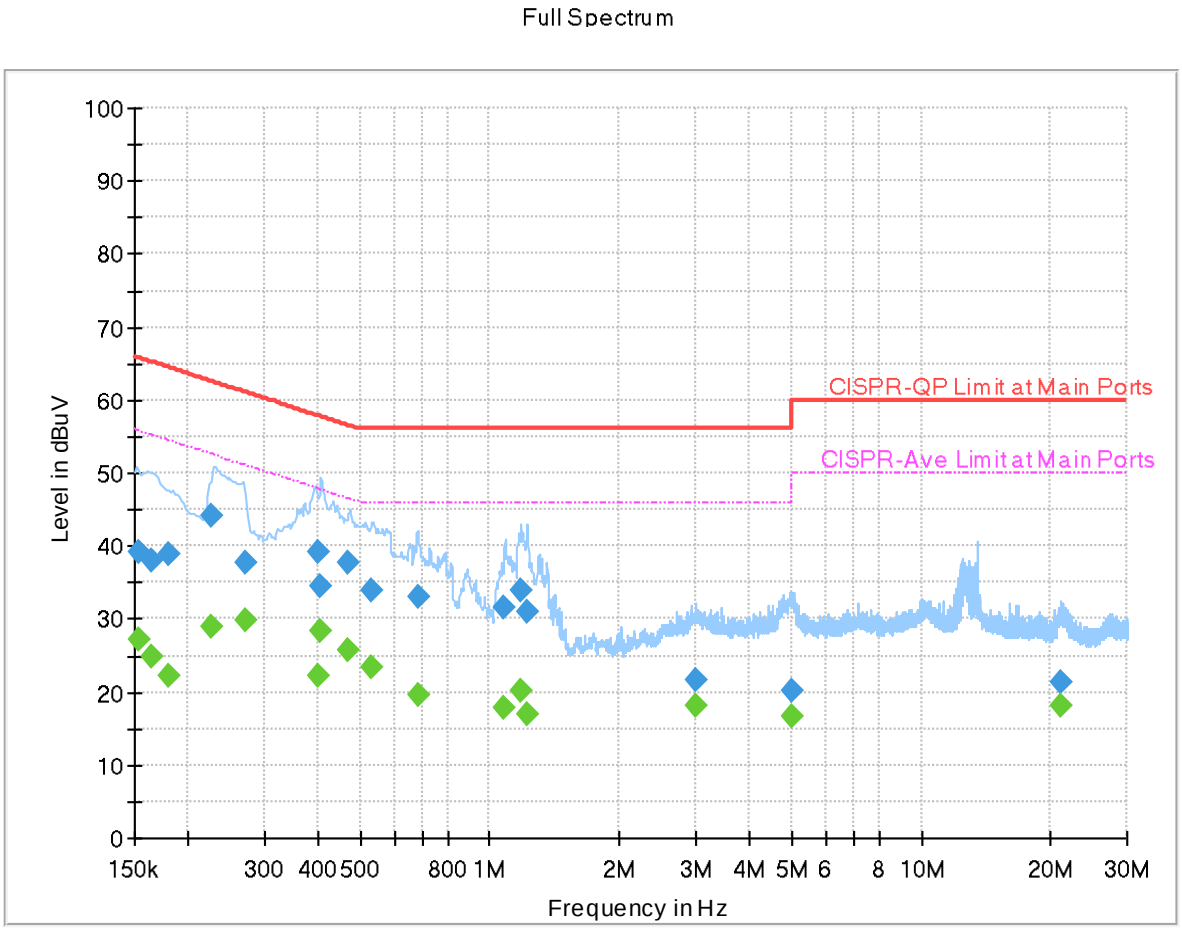
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	PE	Corr. (dB)
0.152093	---	29.50	55.89	26.39	L1	FLO	19.9
0.152093	41.20	---	65.89	24.69	L1	FLO	19.9
0.158280	---	28.26	55.55	27.29	L1	FLO	19.9
0.158280	40.21	---	65.55	25.34	L1	FLO	19.9
0.179250	---	22.87	54.52	31.65	L1	FLO	19.9
0.179250	37.93	---	64.52	26.59	L1	FLO	19.9
0.233250	---	33.19	52.33	19.14	L1	FLO	19.9
0.233250	44.04	---	62.33	18.29	L1	FLO	19.9
0.240540	---	29.91	52.08	22.17	L1	FLO	19.9
0.240540	42.61	---	62.08	19.47	L1	FLO	19.9
0.267450	---	28.34	51.20	22.86	L1	FLO	19.9
0.267450	40.52	---	61.20	20.68	L1	FLO	19.9
0.371760	---	23.38	48.46	25.08	L1	FLO	19.9
0.371760	36.39	---	58.46	22.07	L1	FLO	19.9
0.400380	---	29.36	47.85	18.49	L1	FLO	19.9
0.400380	36.87	---	57.85	20.98	L1	FLO	19.9
0.440250	---	22.89	47.06	24.17	L1	FLO	19.9
0.440250	37.41	---	57.06	19.65	L1	FLO	19.9
0.485250	---	22.50	46.25	23.75	L1	FLO	19.9

0.485250	35.77	---	56.25	20.48	L1	FLO	19.9
0.534750	---	25.24	46.00	20.76	L1	FLO	19.9
0.534750	34.32	---	56.00	21.68	L1	FLO	19.9
0.680460	---	20.03	46.00	25.97	L1	FLO	19.9
0.680460	31.99	---	56.00	24.01	L1	FLO	19.9
1.081140	---	16.03	46.00	29.97	L1	FLO	19.9
1.081140	33.47	---	56.00	22.53	L1	FLO	19.9
1.194180	---	18.07	46.00	27.93	L1	FLO	19.9
1.194180	22.46	---	56.00	33.54	L1	FLO	19.9
3.041970	---	18.99	46.00	27.01	L1	FLO	20.0
3.041970	22.40	---	56.00	33.60	L1	FLO	20.0
3.641910	---	16.64	46.00	29.36	L1	FLO	20.0
3.641910	19.41	---	56.00	36.59	L1	FLO	20.0
4.956000	---	16.69	46.00	29.31	L1	FLO	20.0
4.956000	20.68	---	56.00	35.32	L1	FLO	20.0
21.705000	---	18.31	50.00	31.69	L1	FLO	20.2
21.705000	21.58	---	60.00	38.42	L1	FLO	20.2

EUT Information

Report NO :	4N1307
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	PE	Corr. (dB)
0.152700	---	27.21	55.85	28.64	N	FLO	20.0
0.152700	39.32	---	65.85	26.53	N	FLO	20.0
0.163500	---	24.93	55.28	30.35	N	FLO	19.9
0.163500	38.00	---	65.28	27.28	N	FLO	19.9
0.179250	---	22.23	54.52	32.29	N	FLO	19.9
0.179250	38.93	---	64.52	25.59	N	FLO	19.9
0.226500	---	28.92	52.58	23.66	N	FLO	19.9
0.226500	44.03	---	62.58	18.55	N	FLO	19.9
0.270600	---	29.71	51.10	21.39	N	FLO	19.9
0.270600	37.83	---	61.10	23.27	N	FLO	19.9
0.399750	---	22.28	47.86	25.58	N	FLO	19.9
0.399750	39.04	---	57.86	18.82	N	FLO	19.9
0.402000	---	28.29	47.81	19.52	N	FLO	19.9
0.402000	34.43	---	57.81	23.38	N	FLO	19.9
0.469500	---	25.60	46.52	20.92	N	FLO	19.9
0.469500	37.73	---	56.52	18.79	N	FLO	19.9
0.530250	---	23.28	46.00	22.72	N	FLO	19.9
0.530250	33.83	---	56.00	22.17	N	FLO	19.9
0.685500	---	19.64	46.00	26.36	N	FLO	19.9

0.685500	33.12	---	56.00	22.88	N	FLO	19.9
1.079250	---	17.88	46.00	28.12	N	FLO	20.0
1.079250	31.70	---	56.00	24.30	N	FLO	20.0
1.184730	---	20.15	46.00	25.85	N	FLO	20.0
1.184730	34.05	---	56.00	21.95	N	FLO	20.0
1.225050	---	16.82	46.00	29.18	N	FLO	20.0
1.225050	30.95	---	56.00	25.05	N	FLO	20.0
3.015690	---	18.06	46.00	27.94	N	FLO	20.0
3.015690	21.56	---	56.00	34.44	N	FLO	20.0
5.024670	---	16.56	50.00	33.44	N	FLO	20.0
5.024670	20.26	---	60.00	39.74	N	FLO	20.0
21.167250	---	18.12	50.00	31.88	N	FLO	20.2
21.167250	21.40	---	60.00	38.60	N	FLO	20.2

Appendix C. Radiated Spurious Emission Test Data

Test Engineer :	Daniel Lee, Fu Chen and Troye Hsieh	Temperature :	19.1~20.9°C
		Relative Humidity :	50.2~65.8%

Note symbol

-L	**Low channel location**
-R	**High channel location**

C1. Radiated Spurious Emission Test Modes

Mode	Band	Band (GHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	U-NII-1	5.15-5.25	1+2 (CDD)	802.11a	36	5180	6Mbps	-	-
Mode 2	U-NII-1	5.15-5.25	1+2 (CDD)	802.11a	40	5200	6Mbps	-	-
Mode 3	U-NII-1	5.15-5.25	1+2 (CDD)	802.11a	44	5220	6Mbps	-	-
Mode 4	U-NII-1	5.15-5.25	1+2 (CDD)	802.11a	48	5240	6Mbps	-	-
Mode 5	U-NII-1	5.15-5.25	1+2 (CDD)	802.11ac VHT20	36	5180	MCS0	-	-
Mode 6	U-NII-1	5.15-5.25	1+2 (CDD)	802.11ac VHT20	44	5220	MCS0	-	-
Mode 7	U-NII-1	5.15-5.25	1+2 (CDD)	802.11ac VHT20	48	5240	MCS0	-	-
Mode 8	U-NII-1	5.15-5.25	1+2 (CDD)	802.11ac VHT40	38	5190	MCS0	-	-
Mode 9	U-NII-1	5.15-5.25	1+2 (CDD)	802.11ac VHT40	46	5230	MCS0	-	-
Mode 10	U-NII-1	5.15-5.25	1+2 (CDD)	802.11ac VHT80	42	5210	MCS0	-	-
Mode 11	U-NII-1	5.15-5.25	1+2 (CDD)	802.11ax HE20	36	5180	MCS0	Full RU	-
Mode 12	U-NII-1	5.15-5.25	1+2 (CDD)	802.11ax HE20	40	5200	MCS0	Full RU	-
Mode 13	U-NII-1	5.15-5.25	1+2 (CDD)	802.11ax HE20	44	5220	MCS0	Full RU	-
Mode 14	U-NII-1	5.15-5.25	1+2 (CDD)	802.11ax HE20	48	5240	MCS0	Full RU	-
Mode 15	U-NII-1	5.15-5.25	1+2 (CDD)	802.11ax HE40	38	5190	MCS0	Full RU	-
Mode 16	U-NII-1	5.15-5.25	1+2 (CDD)	802.11ax HE40	46	5230	MCS0	Full RU	-
Mode 17	U-NII-1	5.15-5.25	1+2 (CDD)	802.11ax HE80	42	5210	MCS0	Full RU	-
Mode 18	U-NII-2A	5.25-5.35	1+2 (CDD)	802.11a	52	5260	6Mbps	-	-
Mode 19	U-NII-2A	5.25-5.35	1+2 (CDD)	802.11a	60	5300	6Mbps	-	-
Mode 20	U-NII-2A	5.25-5.35	1+2 (CDD)	802.11a	64	5320	6Mbps	-	-
Mode 21	U-NII-2A	5.15-5.25	1+2 (CDD)	802.11ac VHT20	52	5260	MCS0	-	-
Mode 22	U-NII-2A	5.15-5.25	1+2 (CDD)	802.11ac VHT20	60	5300	MCS0	-	-

Mode	Band	Band (GHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 23	U-NII-2A	5.15-5.25	1+2 (CDD)	802.11ac VHT20	64	5320	MCS0	-	-
Mode 24	U-NII-2A	5.15-5.25	1+2 (CDD)	802.11ac VHT40	54	5270	MCS0	-	-
Mode 25	U-NII-2A	5.15-5.25	1+2 (CDD)	802.11ac VHT40	62	5310	MCS0	-	-
Mode 26	U-NII-2A	5.15-5.25	1+2 (CDD)	802.11ac VHT80	58	5290	MCS0	-	-
Mode 27	U-NII-2A	5.25-5.35	1+2 (CDD)	802.11ax HE20	52	5260	MCS0	Full RU	-
Mode 28	U-NII-2A	5.25-5.35	1+2 (CDD)	802.11ax HE20	60	5300	MCS0	Full RU	-
Mode 29	U-NII-2A	5.25-5.35	1+2 (CDD)	802.11ax HE20	64	5320	MCS0	Full RU	-
Mode 30	U-NII-2A	5.25-5.35	1+2 (CDD)	802.11ax HE40	54	5270	MCS0	Full RU	-
Mode 31	U-NII-2A	5.25-5.35	1+2 (CDD)	802.11ax HE40	62	5310	MCS0	Full RU	-
Mode 32	U-NII-2A	5.25-5.35	1+2 (CDD)	802.11ax HE80	58	5290	MCS0	Full RU	-
Mode 33	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11a	100	5500	6Mbps	-	-
Mode 34	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11a	116	5580	6Mbps	-	-
Mode 35	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11a	140	5700	6Mbps	-	-
Mode 36	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11a	144	5720	6Mbps	-	-
Mode 37	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ac VHT20	100	5500	MCS0	-	-
Mode 38	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ac VHT20	116	5580	MCS0	-	-
Mode 39	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ac VHT20	140	5700	MCS0	-	-
Mode 40	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ac VHT20	144	5720	MCS0	-	-
Mode 41	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ac VHT40	102	5510	MCS0	-	-
Mode 42	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ac VHT40	110	5550	MCS0	-	-
Mode 43	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ac VHT40	134	5670	MCS0	-	-
Mode 44	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ac VHT40	142	5710	MCS0	-	-
Mode 45	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ac VHT80	106	5530	MCS0	-	-
Mode 46	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ac VHT80	122	5610	MCS0	-	-
Mode 47	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ac VHT80	138	5690	MCS0	-	-
Mode 48	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ax HE20	100	5500	MCS0	Full RU	-
Mode 49	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ax HE20	116	5580	MCS0	Full RU	-
Mode 50	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ax HE20	140	5700	MCS0	Full RU	-
Mode 51	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ax HE20	144	5720	MCS0	Full RU	-
Mode 52	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ax HE40	102	5510	MCS0	Full RU	-
Mode 53	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ax HE40	110	5550	MCS0	Full RU	-
Mode 54	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ax HE40	134	5670	MCS0	Full RU	-
Mode 55	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ax HE40	142	5710	MCS0	Full RU	-

Mode	Band	Band (GHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 56	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ax HE80	106	5530	MCS0	Full RU	-
Mode 57	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ax HE80	122	5610	MCS0	Full RU	-
Mode 58	U-NII-2C	5.47-5.725	1+2 (CDD)	802.11ax HE80	138	5690	MCS0	Full RU	-
Mode 59	U-NII-2A	5.25-5.35	1+2 (CDD)	802.11ac VHT40	142	5710	MCS0	Full RU	SHF
Mode 60	U-NII-2A	5.25-5.35	1+2 (CDD)	802.11ac VHT40	142	5710	MCS0	Full RU	LF

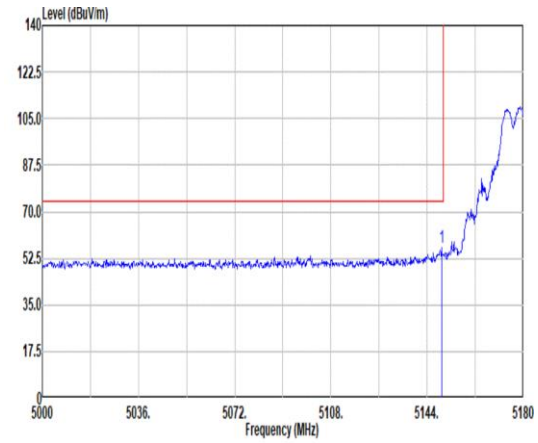
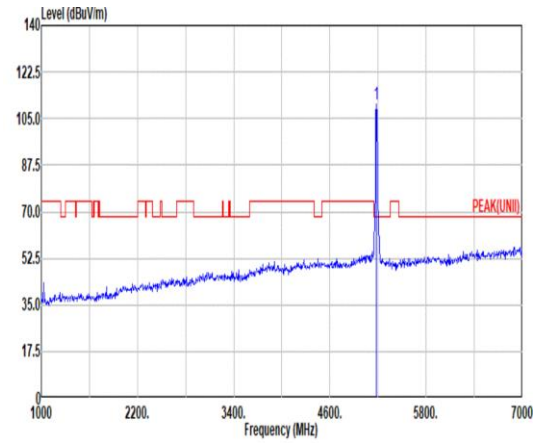
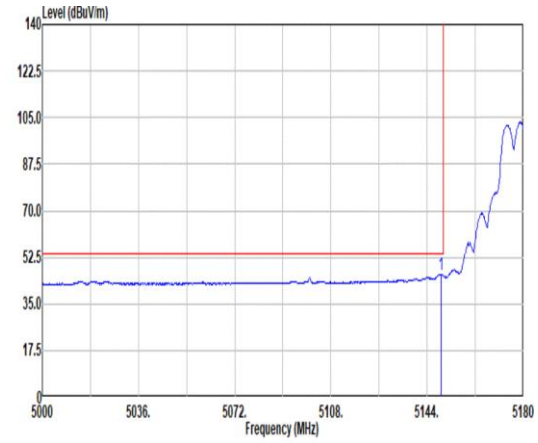
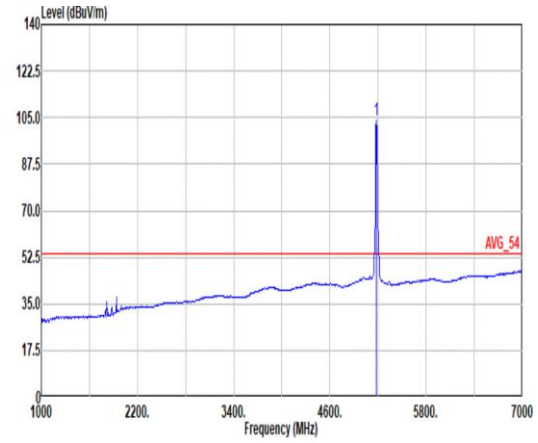
C2. Summary of each worse mode

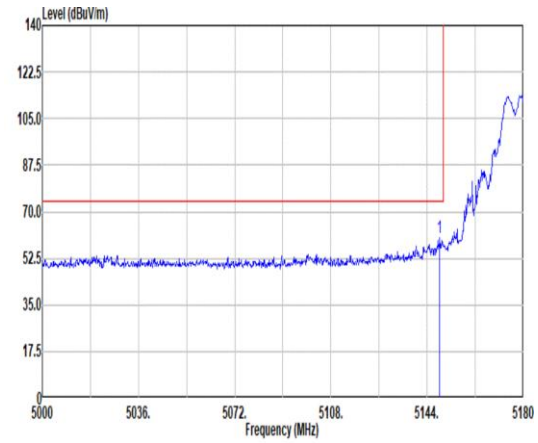
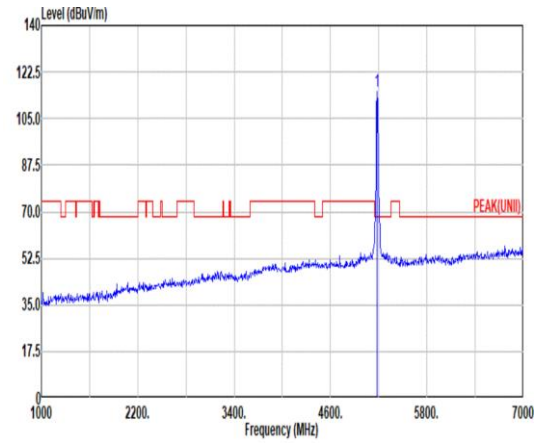
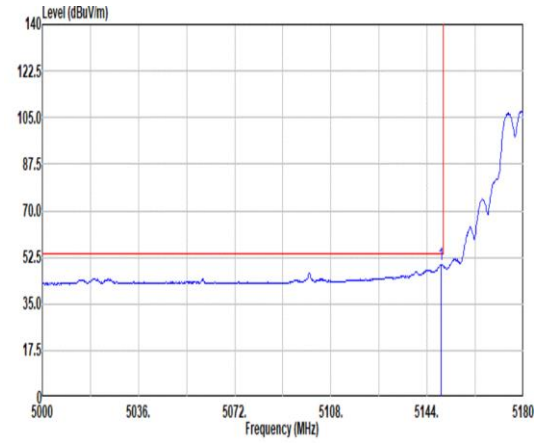
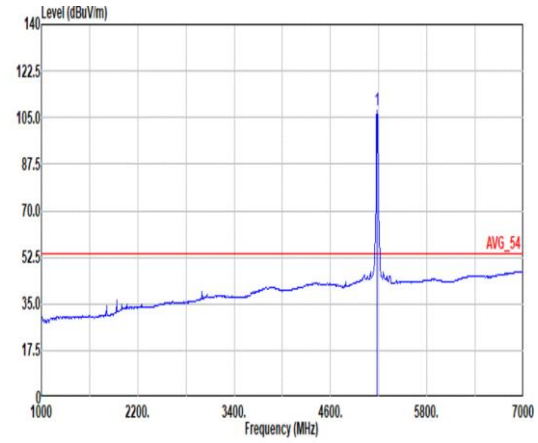
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
1	802.11a	36	5149.22	49.66	54.00	-4.34	V	Avg.	Pass	-	Band Edge
	802.11a	36	10360.00	48.79	68.20	-19.41	V	Peak	Pass	-	Harmonic
2	802.11a	40	5120.00	48.37	54.00	-5.63	V	Avg.	Pass	-	Band Edge
3	802.11a	44	5147.62	52.19	54.00	-1.81	V	Avg.	Pass	-	Band Edge
	802.11a	44	15660.00	51.92	54.00	-2.08	V	Avg.	Pass	-	Harmonic
4	802.11a	48	5084.00	49.21	54.00	-4.79	V	Avg.	Pass	-	Band Edge
	802.11a	48	15720.00	45.63	54.00	-8.37	H	Avg.	Pass	-	Harmonic
5	802.11ac VHT20	36	5149.94	49.89	54.00	-4.11	V	Avg.	Pass	-	Band Edge
	802.11ac VHT20	36	10480.00	45.20	68.20	-23.00	H	Peak	Pass	-	Harmonic
6	802.11ac VHT20	44	5149.38	51.26	54.00	-2.74	V	Avg.	Pass	-	Band Edge
	802.11ac VHT20	44	15660.00	43.89	54.00	-10.11	V	Avg.	Pass	-	Harmonic
7	802.11ac VHT20	48	5150.00	49.70	54.00	-4.30	V	Avg.	Pass	-	Band Edge
	802.11ac VHT20	48	15720.00	44.97	54.00	-9.03	V	Avg.	Pass	-	Harmonic
8	802.11ac VHT40	38	5149.53	51.49	54.00	-2.51	V	Avg.	Pass	-	Band Edge
9	802.11ac VHT40	46	5149.96	51.66	54.00	-2.34	V	Avg.	Pass	-	Band Edge
10	802.11ac VHT80	42	5149.31	50.39	54.00	-3.61	V	Avg.	Pass	-	Band Edge
11	802.11ax HE20	36	5149.58	50.09	54.00	-3.91	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	36	10360.00	46.83	68.20	-21.37	V	Peak	Pass	Full RU	Harmonic
12	802.11ax HE20	40	5120.00	48.53	54.00	-5.47	V	Avg.	Pass	Full RU	Band Edge
13	802.11ax HE20	44	5148.28	49.96	54.00	-4.04	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	44	15660.00	45.46	54.00	-8.54	V	Avg.	Pass	Full RU	Harmonic
14	802.11ax HE20	48	5150.00	50.35	54.00	-3.65	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	48	15720.00	44.70	54.00	-9.30	H	Avg.	Pass	Full RU	Harmonic

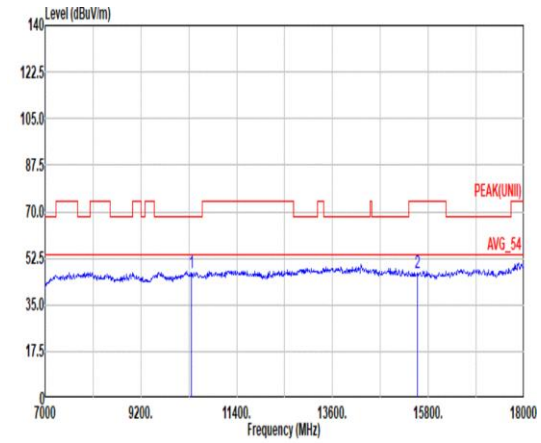
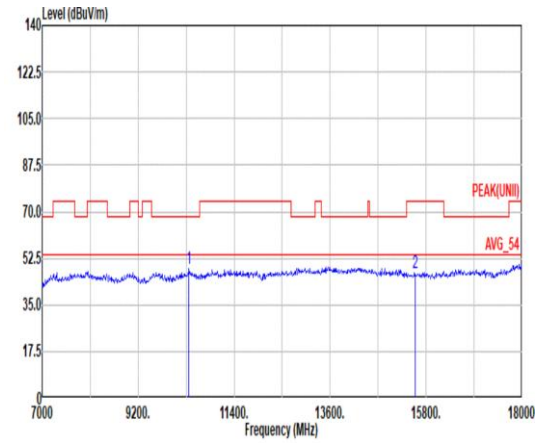
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
15	802.11ax HE40	38	5148.39	49.55	54.00	-4.45	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE40	38	10380.00	46.55	68.20	-21.65	V	Peak	Pass	Full RU	Harmonic
16	802.11ax HE40	46	5146.28	51.74	54.00	-2.26	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE40	46	10460.00	45.95	68.20	-22.25	V	Peak	Pass	Full RU	Harmonic
17	802.11ax HE80	42	5148.89	51.24	54.00	-2.76	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE80	42	10420.00	46.03	68.20	-22.17	V	Peak	Pass	Full RU	Harmonic
18	802.11a	52	5139.88	48.10	54.00	-5.90	V	Avg.	Pass	-	Band Edge
	802.11a	52	10520.00	46.05	68.20	-22.15	H	Peak	Pass	-	Harmonic
19	802.11a	60	5380.00	49.20	54.00	-4.80	V	Avg.	Pass	-	Band Edge
	802.11a	60	15900.00	45.89	74.00	-28.11	V	Peak	Pass	-	Harmonic
20	802.11a	64	5350.24	52.29	54.00	-1.71	V	Avg.	Pass	-	Band Edge
	802.11a	64	15960.00	45.49	74.00	-28.51	V	Peak	Pass	-	Harmonic
21	802.11ac VHT20	52	5102.18	47.41	54.00	-6.59	V	Avg.	Pass	-	Band Edge
	802.11ac VHT20	52	10520.00	46.17	68.20	-22.03	V	Peak	Pass	-	Harmonic
22	802.11ac VHT20	60	5380.00	49.75	54.00	-4.25	V	Avg.	Pass	-	Band Edge
	802.11ac VHT20	60	10600.00	38.59	54.00	-15.41	V	Avg.	Pass	-	Harmonic
23	802.11ac VHT20	64	5350.38	52.94	54.00	-1.06	V	Avg.	Pass	-	Band Edge
	802.11ac VHT20	64	10640.00	45.07	74.00	-28.93	H	Peak	Pass	-	Harmonic
24	802.11ac VHT40	54	5350.18	49.37	54.00	-4.63	V	Avg.	Pass	-	Band Edge
25	802.11ac VHT40	62	5350.05	49.29	54.00	-4.71	V	Avg.	Pass	-	Band Edge
26	802.11ac VHT80	58	5350.18	52.15	54.00	-1.85	V	Avg.	Pass	-	Band Edge
27	802.11ax HE20	52	5139.88	47.98	54.00	-6.02	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	52	10520.00	44.73	68.20	-23.47	H	Peak	Pass	Full RU	Harmonic
28	802.11ax HE20	60	5380.00	49.76	54.00	-4.24	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	60	10600.00	41.42	54.00	-12.58	V	Avg.	Pass	Full RU	Harmonic
29	802.11ax HE20	64	5350.10	51.95	54.00	-2.05	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	64	10640.00	45.96	74.00	-28.04	V	Peak	Pass	Full RU	Harmonic
30	802.11ax HE40	54	5350.18	50.34	54.00	-3.66	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE40	54	10540.00	44.88	68.20	-23.32	V	Peak	Pass	Full RU	Harmonic
31	802.11ax HE40	62	5350.05	51.96	54.00	-2.04	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE40	62	10620.00	45.59	74.00	-28.41	V	Peak	Pass	Full RU	Harmonic
32	802.11ax HE80	58	5351.03	53.23	54.00	-0.77	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE80	58	10580.00	46.41	68.20	-21.79	V	Peak	Pass	Full RU	Harmonic

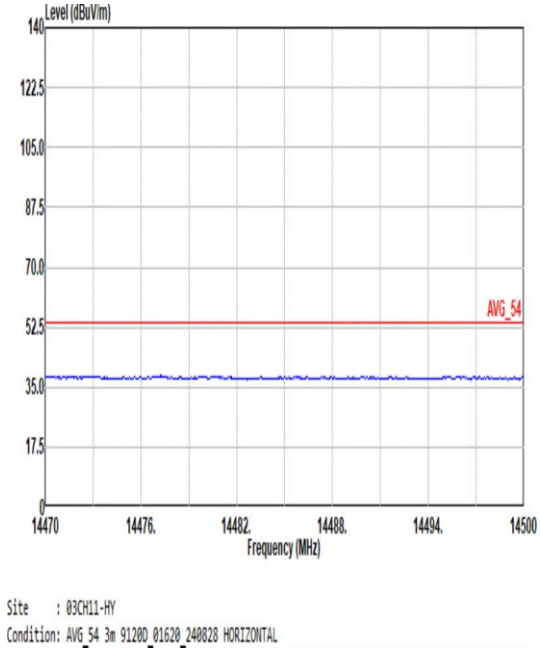
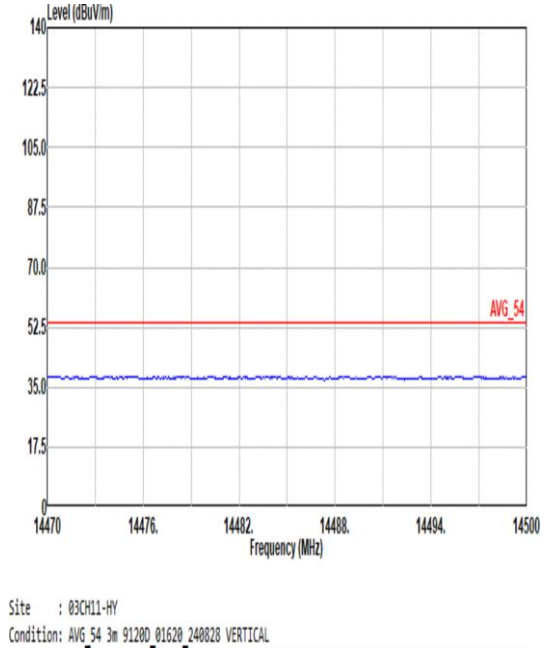
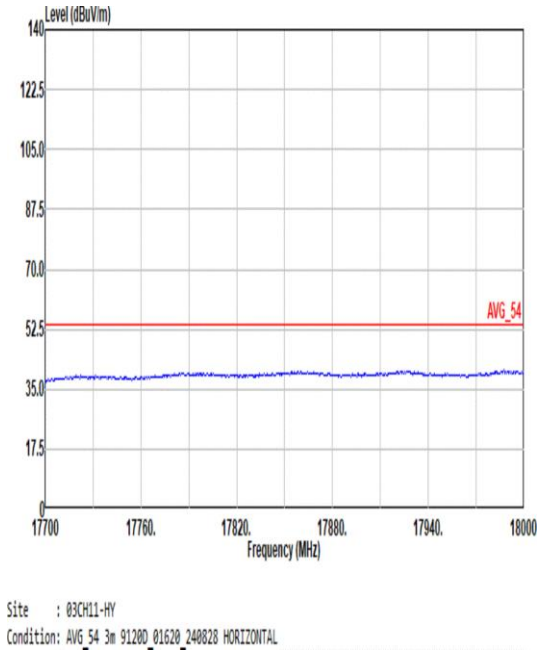
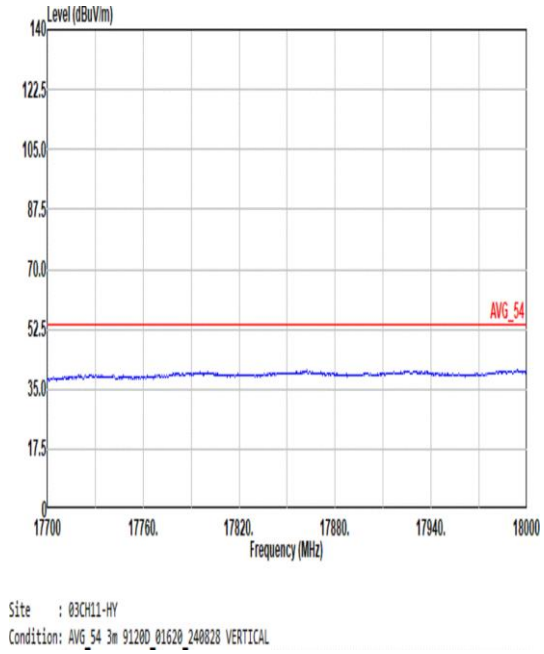
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
33	802.11a	100	5422.45	46.44	54.00	-7.56	V	Avg.	Pass	-	Band Edge
	802.11a	100	16500.00	46.78	68.20	-21.42	H	Peak	Pass	-	Harmonic
34	802.11a	116	5421.53	47.14	54.00	-6.86	V	Avg.	Pass	-	Band Edge
	802.11a	116	16740.00	46.20	68.20	-22.00	H	Peak	Pass	-	Harmonic
35	802.11a	140	5726.39	63.93	68.20	-4.27	V	Peak	Pass	-	Band Edge
	802.11a	140	17100.00	46.13	68.20	-22.07	V	Peak	Pass	-	Harmonic
36	802.11a	144	5882.25	59.46	68.20	-8.74	V	Peak	Pass	-	Band Edge
	802.11a	144	17160.00	45.15	68.20	-23.05	V	Peak	Pass	-	Harmonic
37	802.11ac VHT20	100	5458.60	47.28	54.00	-6.72	V	Avg.	Pass	-	Band Edge
	802.11ac VHT20	100	16500.00	47.37	68.20	-20.83	V	Peak	Pass	-	Harmonic
38	802.11ac VHT20	116	5421.07	43.76	54.00	-10.24	V	Avg.	Pass	-	Band Edge
	802.11ac VHT20	116	16740.00	52.59	68.20	-15.61	H	Peak	Pass	-	Harmonic
39	802.11ac VHT20	140	5725.68	65.12	68.20	-3.08	V	Peak	Pass	-	Band Edge
	802.11ac VHT20	140	17100.00	46.51	68.20	-21.69	V	Peak	Pass	-	Harmonic
40	802.11ac VHT20	144	5874.25	59.00	68.20	-9.20	V	Peak	Pass	-	Band Edge
	802.11ac VHT20	144	17160.00	46.04	68.20	-22.16	H	Peak	Pass	-	Harmonic
41	802.11ac VHT40	102	5470.00	66.67	68.20	-1.53	V	Peak	Pass	-	Band Edge
42	802.11ac VHT40	110	5469.00	64.60	68.20	-3.60	V	Peak	Pass	-	Band Edge
43	802.11ac VHT40	134	5726.15	66.92	68.20	-1.28	V	Peak	Pass	-	Band Edge
44	802.11ac VHT40	142	5853.25	61.02	68.20	-7.18	V	Peak	Pass	-	Band Edge
45	802.11ac VHT80	106	5457.82	52.36	54.00	-1.64	V	Avg.	Pass	-	Band Edge
46	802.11ac VHT80	122	5725.63	64.69	68.20	-3.51	V	Peak	Pass	-	Band Edge
47	802.11ac VHT80	138	5852.50	61.63	68.20	-6.57	V	Peak	Pass	-	Band Edge
48	802.11ax HE20	100	5419.90	52.42	54.00	-1.58	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	100	16500.00	46.50	68.20	-21.70	V	Peak	Pass	Full RU	Harmonic
49	802.11ax HE20	116	5459.94	48.34	54.00	-5.66	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	116	16740.00	46.13	68.20	-22.07	H	Peak	Pass	Full RU	Harmonic
50	802.11ax HE20	140	5725.03	66.35	68.20	-1.85	V	Peak	Pass	Full RU	Band Edge
	802.11ax HE20	140	17100.00	45.93	68.20	-22.27	V	Peak	Pass	Full RU	Harmonic
51	802.11ax HE20	144	5874.50	59.76	68.20	-8.44	V	Peak	Pass	Full RU	Band Edge
	802.11ax HE20	144	17160.00	45.77	68.20	-22.43	H	Peak	Pass	Full RU	Harmonic
52	802.11ax HE40	102	5459.92	50.93	54.00	-3.07	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE40	102	16530.00	46.94	68.20	-21.26	V	Peak	Pass	Full RU	Harmonic

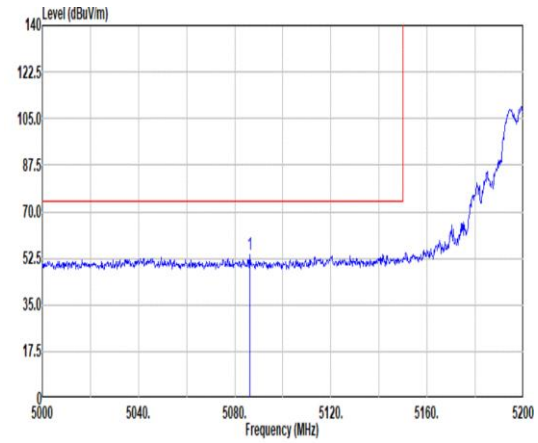
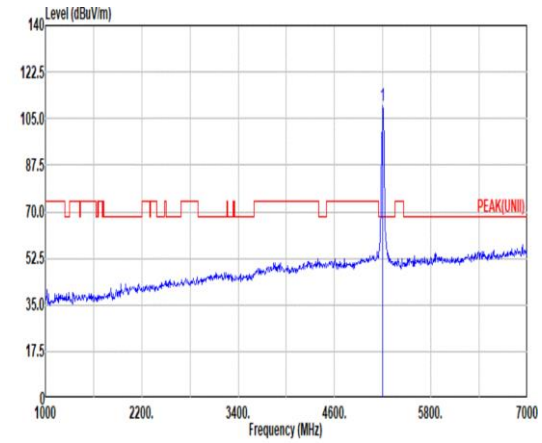
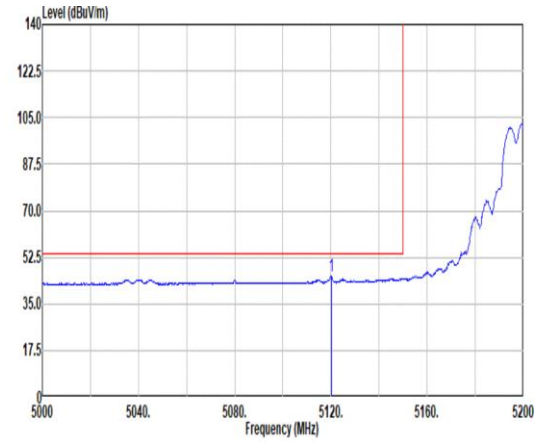
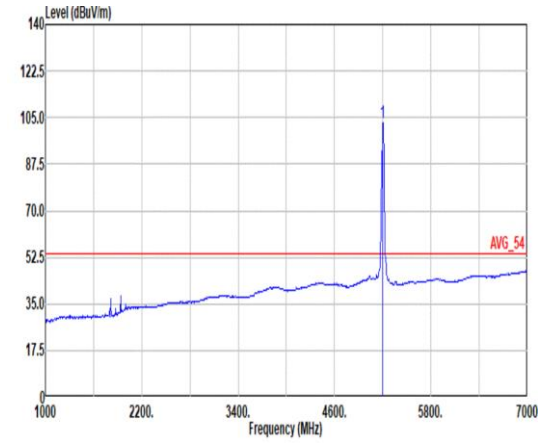
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
53	802.11ax HE40	110	5469.60	65.39	68.20	-2.81	V	Peak	Pass	Full RU	Band Edge
	802.11ax HE40	110	16650.00	46.34	68.20	-21.86	H	Peak	Pass	Full RU	Harmonic
54	802.11ax HE40	134	5726.43	65.12	68.20	-3.08	V	Peak	Pass	Full RU	Band Edge
	802.11ax HE40	134	17010.00	46.14	68.20	-22.06	H	Peak	Pass	Full RU	Harmonic
55	802.11ax HE40	142	5866.25	64.42	68.20	-3.78	V	Peak	Pass	Full RU	Band Edge
	802.11ax HE40	142	17130.00	45.96	68.20	-22.24	V	Peak	Pass	Full RU	Harmonic
56	802.11ax HE80	106	5457.46	52.89	54.00	-1.11	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE80	106	16590.00	46.82	68.20	-21.38	H	Peak	Pass	Full RU	Harmonic
57	802.11ax HE80	122	5729.35	66.52	68.20	-1.68	V	Peak	Pass	Full RU	Band Edge
	802.11ax HE80	122	16830.00	46.42	68.20	-21.78	V	Peak	Pass	Full RU	Harmonic
58	802.11ax HE80	138	5851.60	62.82	68.20	-5.38	V	Peak	Pass	Full RU	Band Edge
	802.11ax HE80	138	17070.00	46.39	68.20	-21.81	V	Peak	Pass	Full RU	Harmonic
59	802.11ac VHT40	142	38684.00	47.81	54.00	-6.19	H	Avg.	Pass	-	SHF
60	802.11ac VHT40	142	30.97	33.74	40.00	-6.26	H	Peak	Pass	-	LF

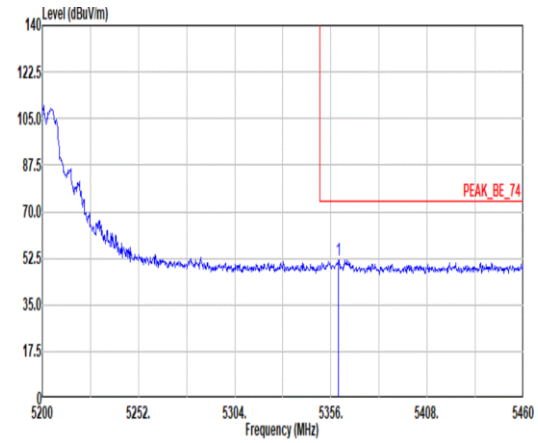
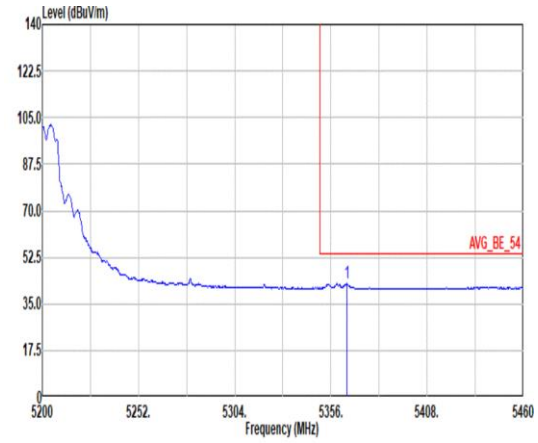
Mode	1	
	Band Edge	
	U-NII-1_5.15-5.25_802.11a_CH36_5180MHz	
ANT	1+2 (CDD)	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.40 56.28 74.00 -17.72 45.58 33.20 10.37 32.87 0.00 223 40 PEAK	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 110.30 ------ ------ 99.71 33.07 10.39 32.87 0.00 223 40 PEAK
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.22 46.07 54.00 -7.93 35.37 33.20 10.37 32.87 0.00 223 40 AVERAGE	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 104.14 ------ ------ 93.54 33.08 10.39 32.87 0.00 223 40 AVERAGE

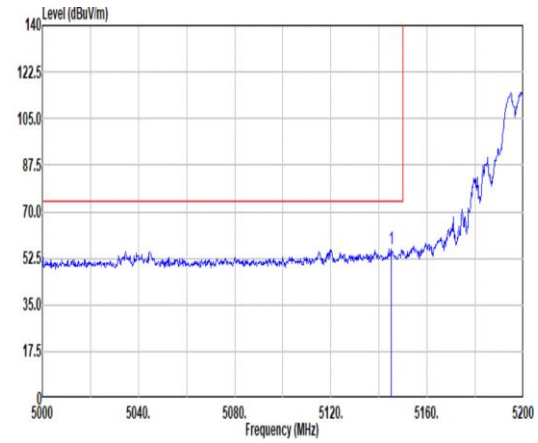
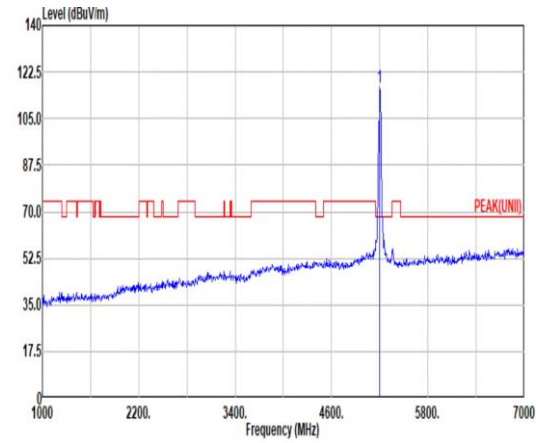
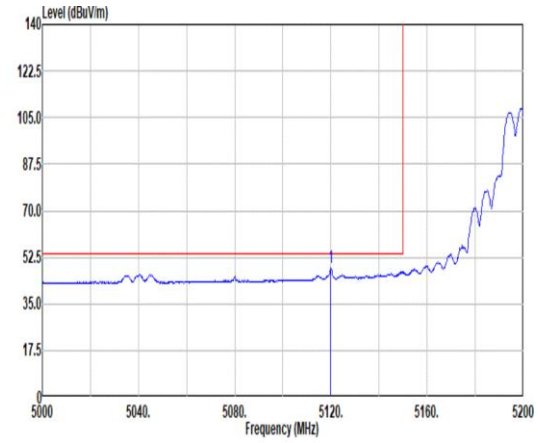
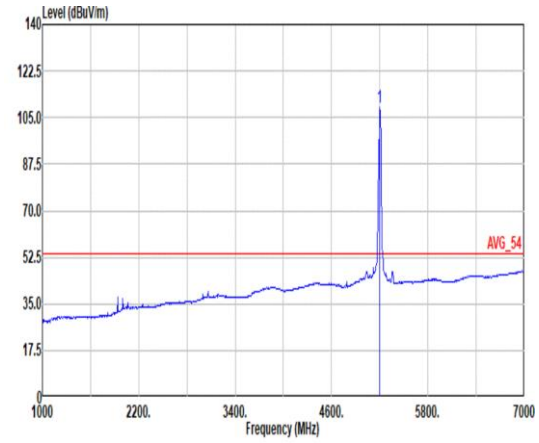
Mode	1	
	Band Edge	
	U-NII-1_5.15-5.25_802.11a_CH36_5180MHz	
ANT	1+2 (CDD)	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5148.68 60.20 74.00 -13.80 49.51 33.19 10.37 32.87 0.00 368 360 PEAK	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 115.38 ------ ------ 104.79 33.07 10.39 32.87 0.00 368 360 PEAK
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.22 49.66 54.00 -4.34 38.96 33.20 10.37 32.87 0.00 368 360 AVERAGE	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 107.98 ------ ------ 97.38 33.08 10.39 32.87 0.00 368 360 AVERAGE

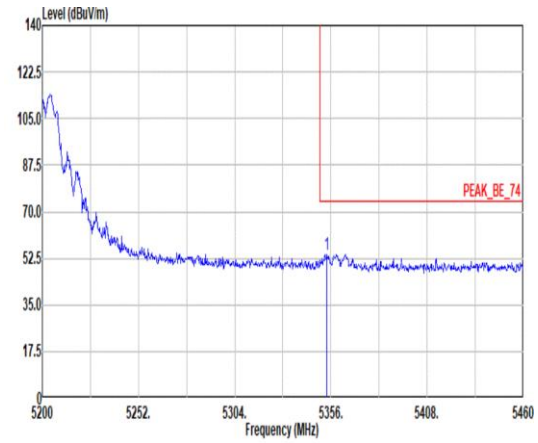
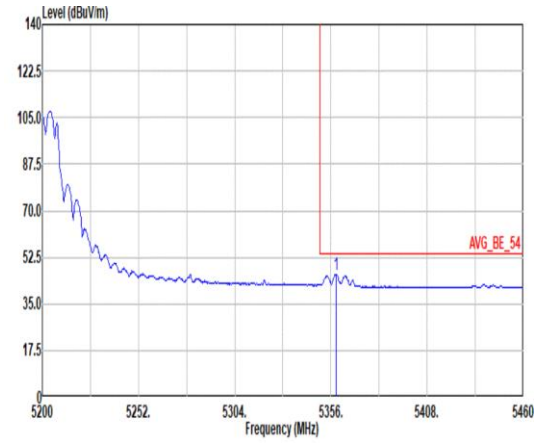
Mode	1	
	Harmonic	
	U-NII-1_5.15-5.25_802.11a_CH36_5180MHz	
ANT	1+2 (CDD)	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10360.00 47.10 68.20 -21.10 51.18 38.60 17.53 60.53 0.32 -- -- PEAK 2 15540.00 46.98 74.00 -27.02 49.34 38.10 21.57 62.36 0.33 -- -- PEAK	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10360.00 48.79 68.20 -19.41 52.87 38.60 17.53 60.53 0.32 -- -- PEAK 2 15540.00 47.12 74.00 -26.88 49.48 38.10 21.57 62.36 0.33 -- -- PEAK

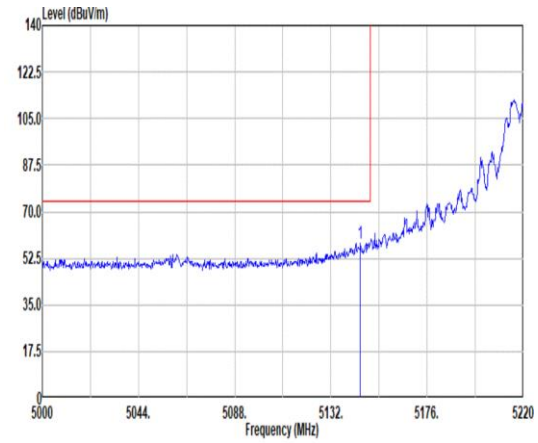
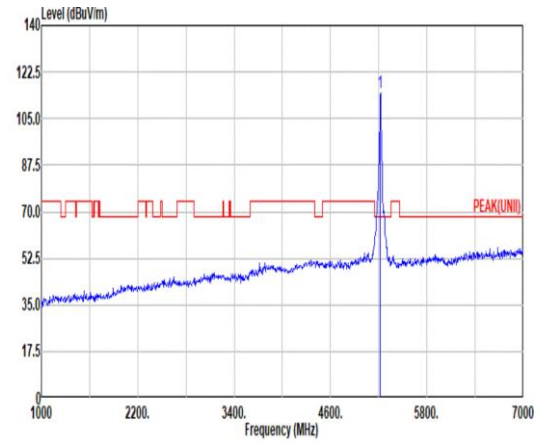
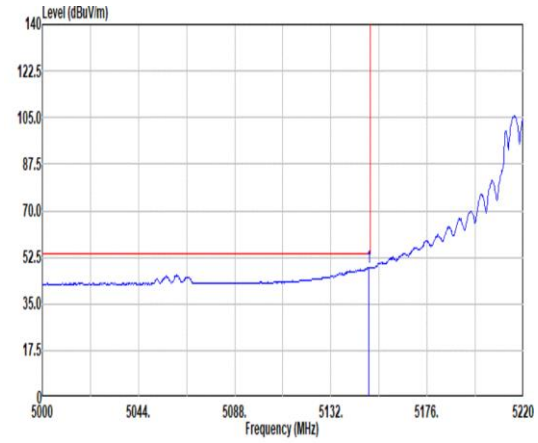
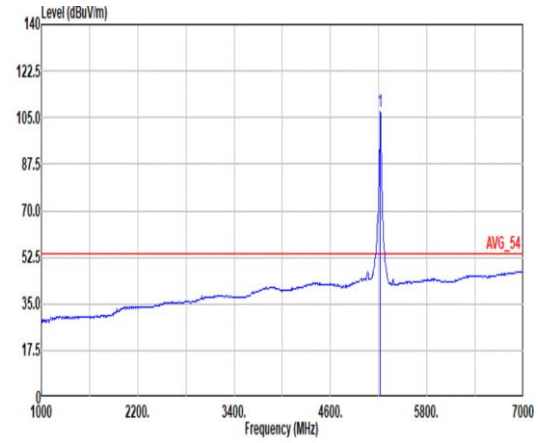
Mode	1	
	Harmonic	
	U-NII-1_5.15-5.25_802.11a_CH36_5180MHz	
ANT	1+2 (CDD)	
Pol.	Horizontal	Vertical
14.47G ~14.5G Avg		
17.7G ~18G Avg		

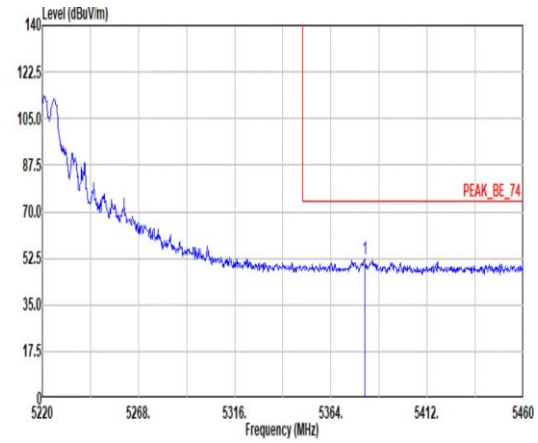
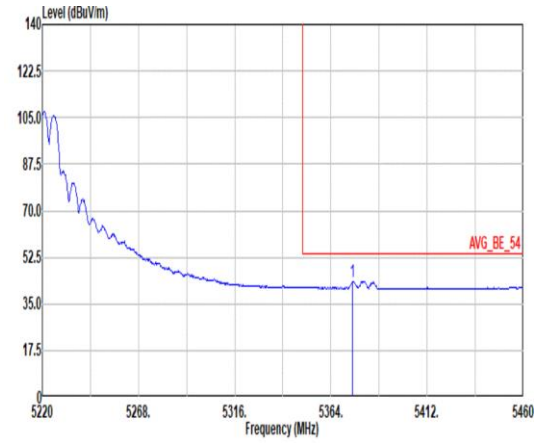
Mode	2	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11a_CH40_5200MHz	
ANT	1+2 (CDD)	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5086.40 53.80 74.00 -20.20 43.39 32.97 10.31 32.87 0.00 200 46 PEAK	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5200.00 109.85 ------ ------ 99.30 33.00 10.41 32.86 0.00 200 46 PEAK
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5120.20 45.61 54.00 -8.39 35.06 33.08 10.34 32.87 0.00 200 46 AVERAGE	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5200.00 103.14 ------ ------ 92.59 33.00 10.41 32.86 0.00 200 46 AVERAGE

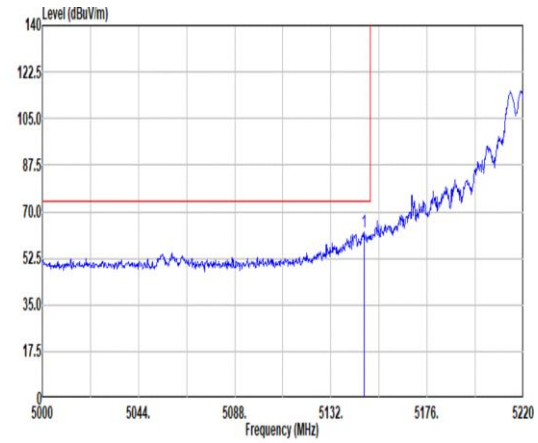
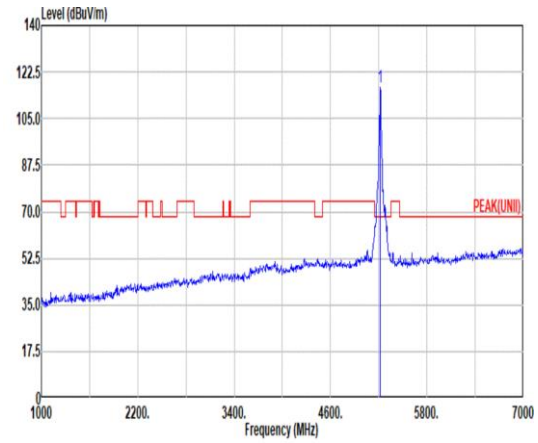
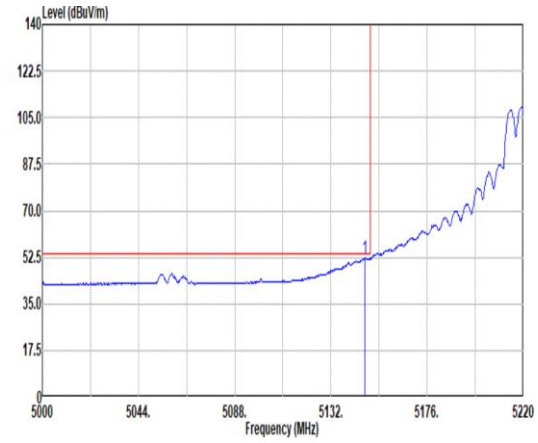
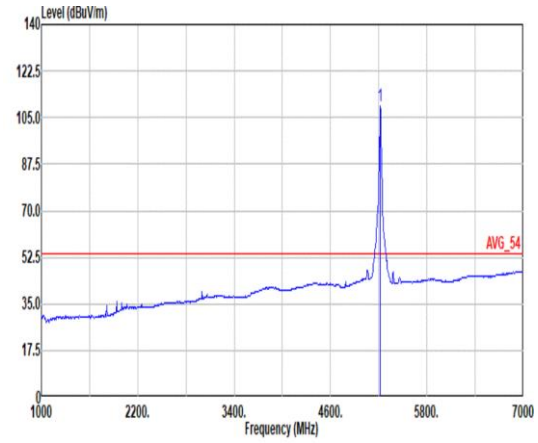
Mode	2	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11a_CH40_5200MHz	
ANT	1+2 (CDD)	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5360.16 51.84 74.00 -22.16 41.30 32.88 10.51 32.85 0.00 200 46 PEAK	Blank
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5364.58 42.60 54.00 -11.40 32.06 32.87 10.52 32.85 0.00 200 46 AVERAGE	Blank

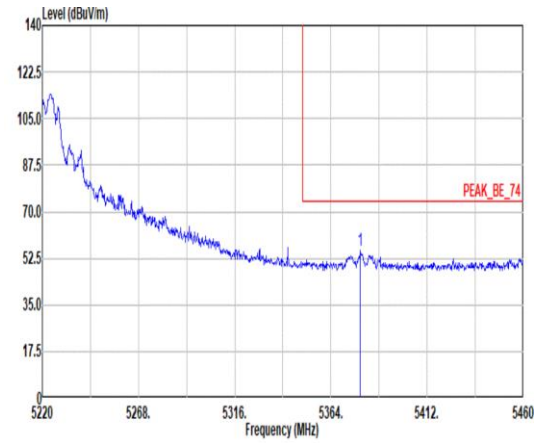
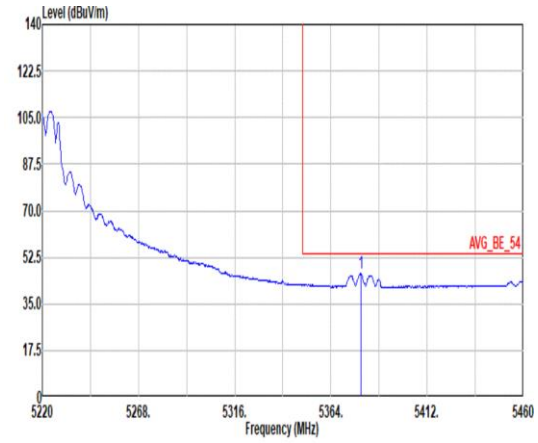
Mode	2	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11a_CH40_5200MHz	
ANT	1+2 (CDD)	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5145.00 56.10 74.00 -17.90 45.43 33.18 10.36 32.87 0.00 139 360 PEAK	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5200.00 116.59 ------ ------ 106.04 33.00 10.41 32.86 0.00 139 360 PEAK
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5120.00 48.37 54.00 -5.63 37.82 33.08 10.34 32.87 0.00 139 360 AVERAGE	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5200.00 108.82 ------ ------ 98.27 33.00 10.41 32.86 0.00 139 360 AVERAGE

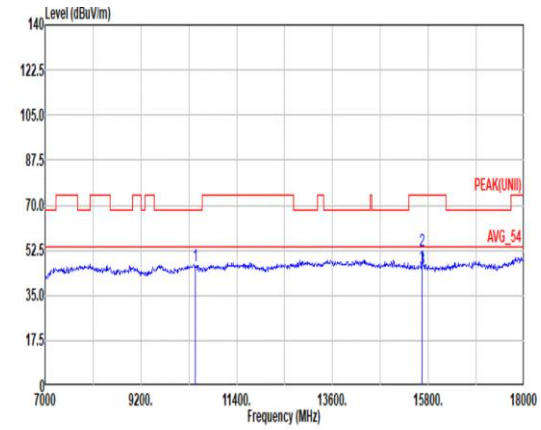
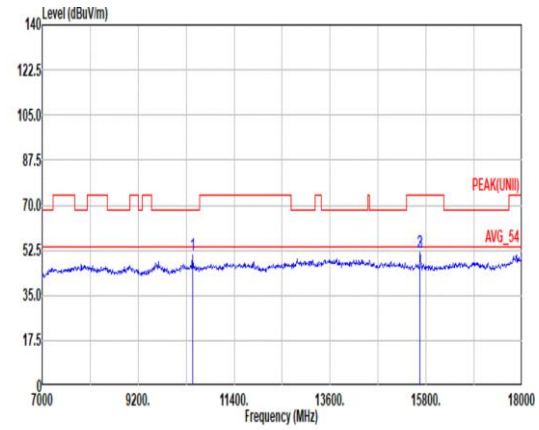
Mode	2	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11a_CH40_5200MHz	
ANT	1+2 (CDD)	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5353.66 54.06 74.00 -19.94 43.51 32.89 10.51 32.85 0.00 139 360 PEAK	Blank
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5358.86 46.22 54.00 -7.78 35.68 32.88 10.51 32.85 0.00 139 360 AVERAGE	Blank

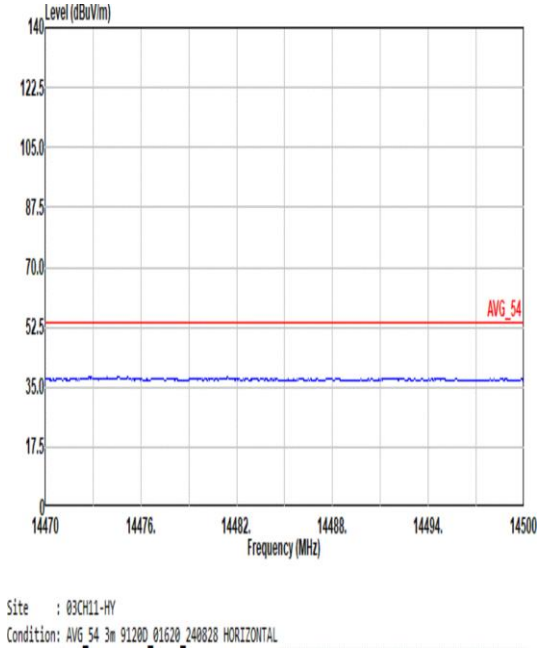
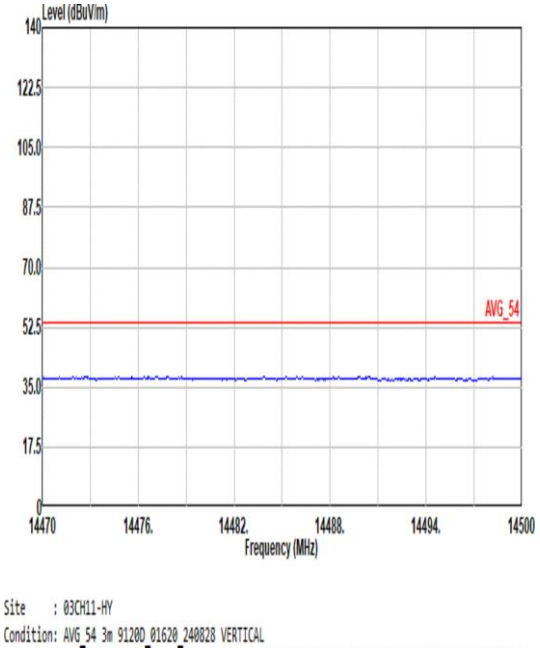
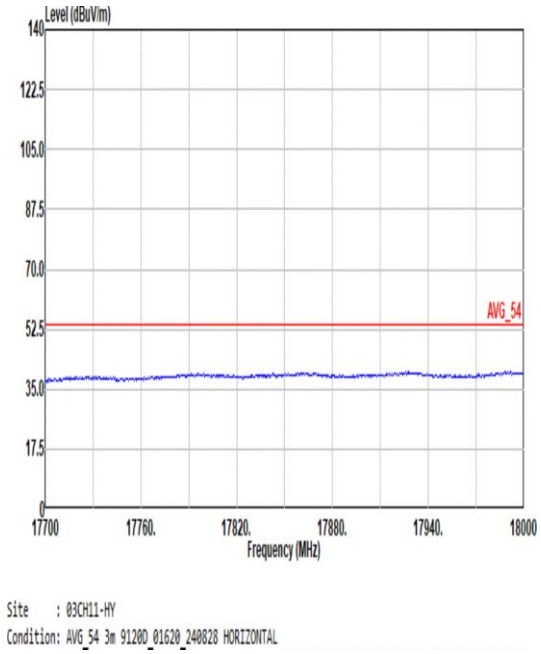
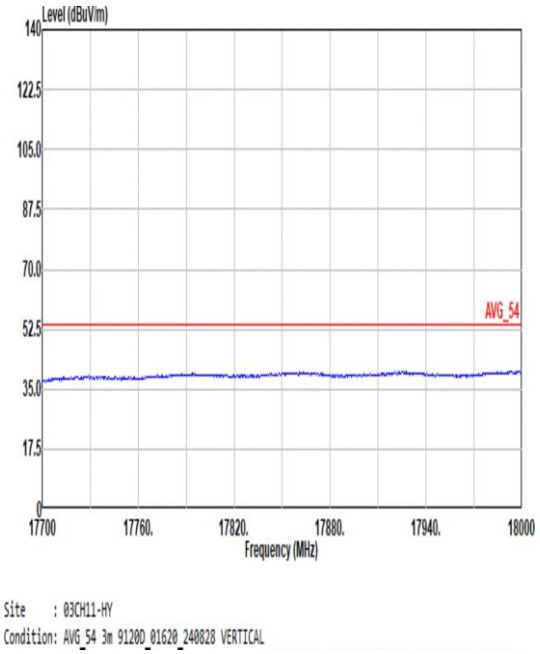
Mode	3	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11a_CH44_5220MHz	
ANT	1+2 (CDD)	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5145.42 58.34 74.00 -15.66 47.67 33.18 10.36 32.87 0.00 193 281 PEAK	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5220.00 114.50 ------ ------ 103.93 33.00 10.43 32.86 0.00 193 281 PEAK
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.16 48.70 54.00 -5.30 38.00 33.20 10.37 32.87 0.00 193 281 AVERAGE	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5220.00 107.44 ------ ------ 96.88 33.00 10.42 32.86 0.00 193 281 AVERAGE

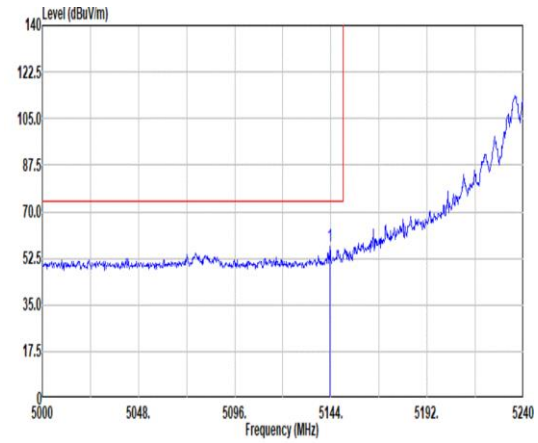
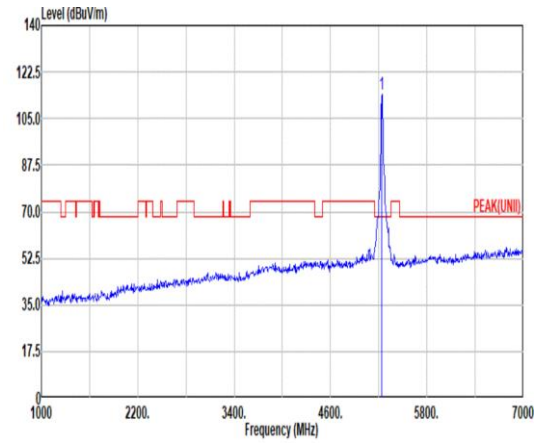
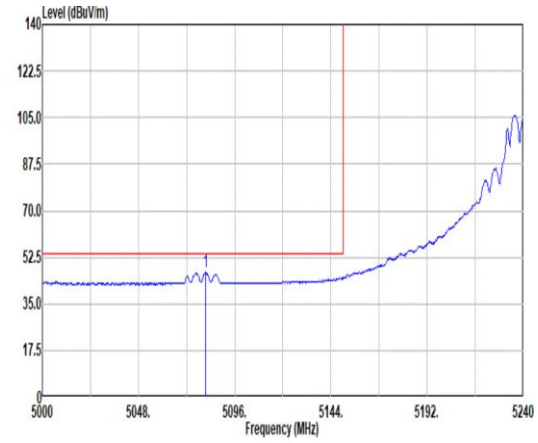
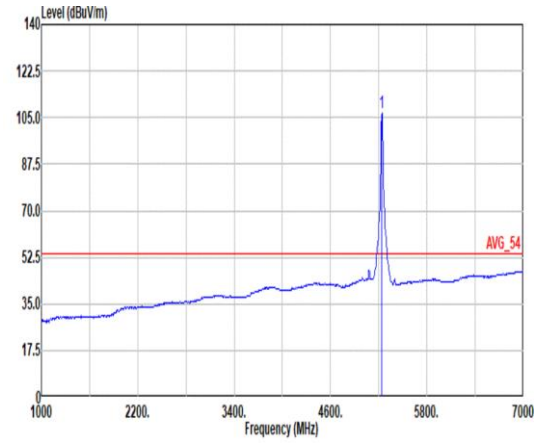
Mode	3	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11a_CH44_5220MHz	
ANT	1+2 (CDD)	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5380.00 52.20 74.00 -21.80 41.68 32.84 10.53 32.85 0.00 193 281 PEAK	Blank
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5374.00 43.27 54.00 -10.73 32.75 32.85 10.52 32.85 0.00 193 281 AVERAGE	Blank

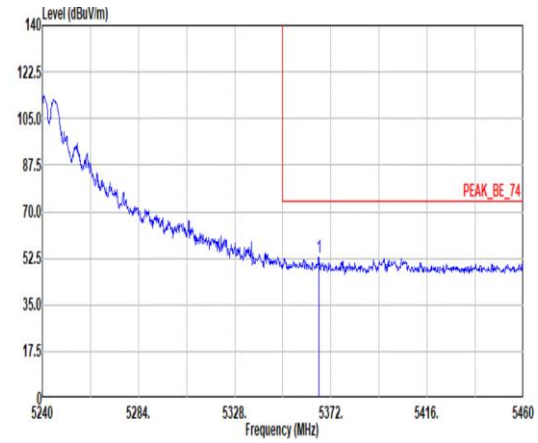
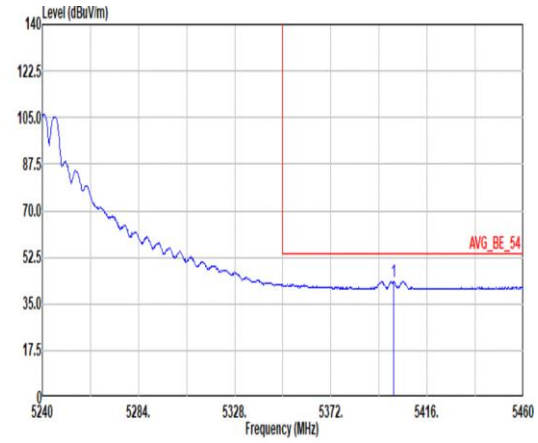
Mode	3	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11a_CH44_5220MHz	
ANT	1+2 (CDD)	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5147.18 62.21 74.00 -11.79 51.52 33.19 10.37 32.87 0.00 367 0 PEAK	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5220.00 116.67 ------ ------ 106.11 33.00 10.42 32.86 0.00 367 0 PEAK
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5147.62 52.19 54.00 -1.81 41.50 33.19 10.37 32.87 0.00 367 0 AVERAGE	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5220.00 109.43 ------ ------ 98.87 33.00 10.42 32.86 0.00 367 0 AVERAGE

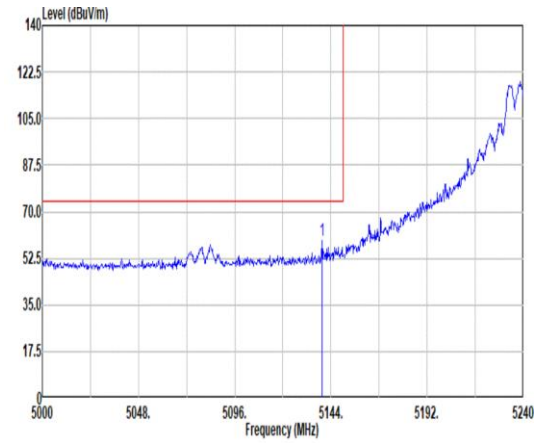
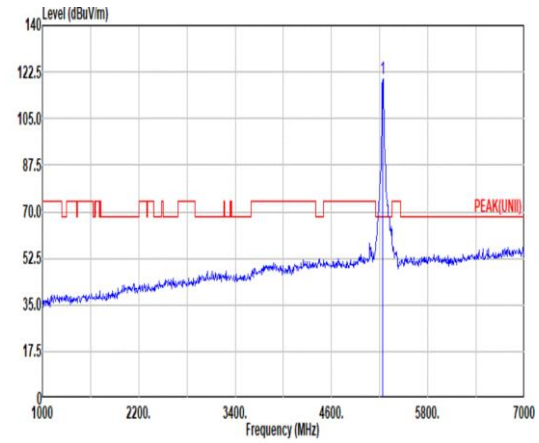
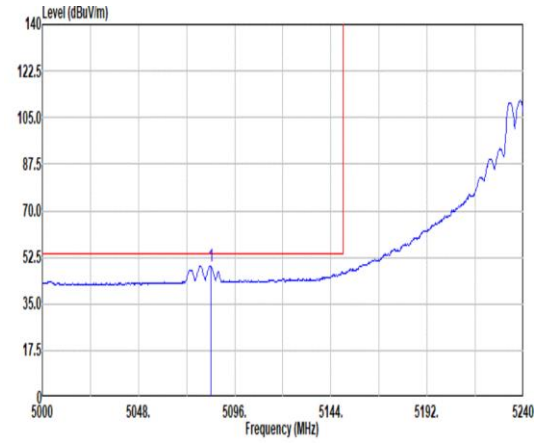
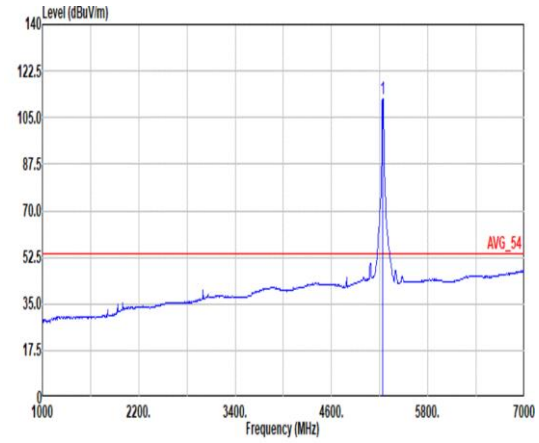
Mode	3	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11a_CH44_5220MHz	
ANT	1+2 (CDD)	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5378.64 55.35 74.00 -18.65 44.83 32.84 10.53 32.85 0.00 367 0 PEAK	Blank
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5378.88 46.24 54.00 -7.76 35.72 32.84 10.53 32.85 0.00 367 0 AVERAGE	Blank

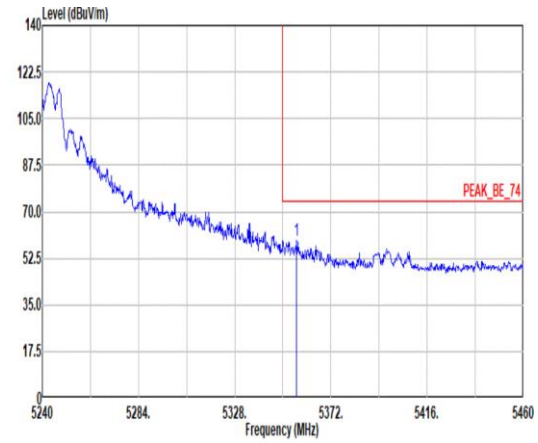
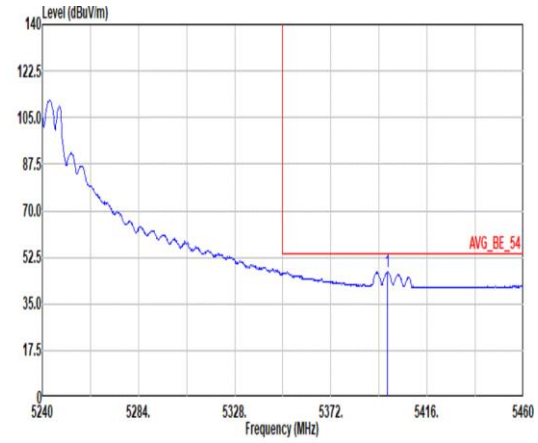
Mode	3	
	Harmonic	
	U-NII-1_5.15-5.25_802.11a_CH44_5220MHz	
ANT	1+2 (CDD)	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10440.00 46.47 68.20 -21.73 50.63 38.60 17.56 60.65 0.33 -- -- PEAK 2 15660.00 52.24 74.00 -21.76 54.73 37.60 21.63 62.05 0.33 100 43 PEAK 3 15660.00 45.63 54.00 -8.37 48.12 37.60 21.63 62.05 0.33 100 43 AVERAGE	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10440.00 50.50 68.20 -17.70 54.66 38.60 17.56 60.65 0.33 300 17 PEAK 2 15660.00 51.92 74.00 -22.08 54.41 37.60 21.63 62.05 0.33 100 35 PEAK 3 15660.00 51.92 54.00 -2.08 54.41 37.60 21.63 62.05 0.33 100 35 AVERAGE

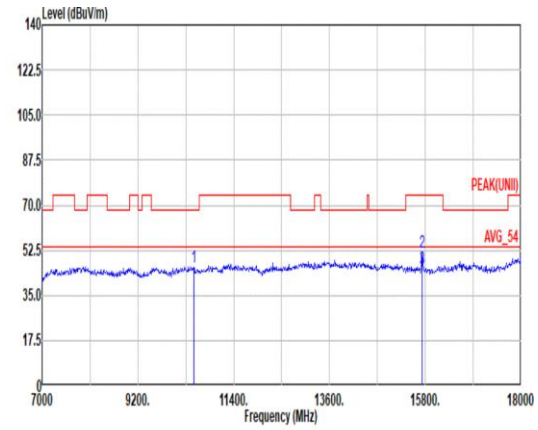
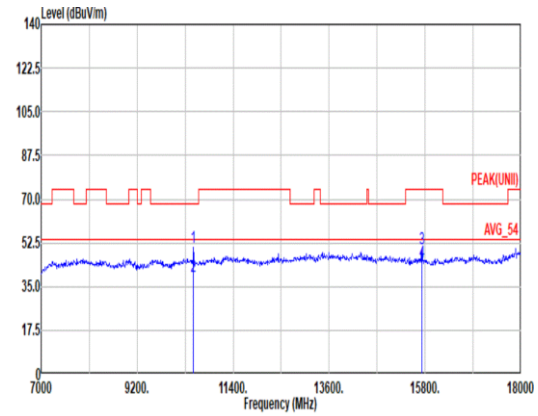
Mode	3	
	Harmonic	
	U-NII-1_5.15-5.25_802.11a_CH44_5220MHz	
ANT	1+2 (CDD)	
Pol.	Horizontal	Vertical
14.47G ~14.5G Avg		
17.7G ~18G Avg		

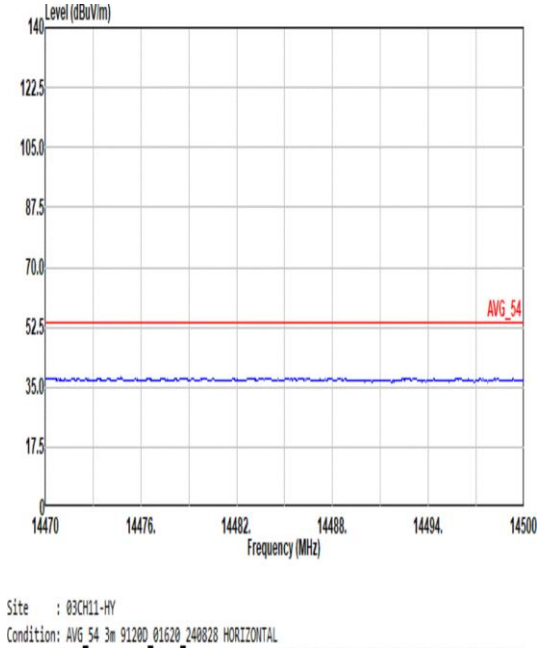
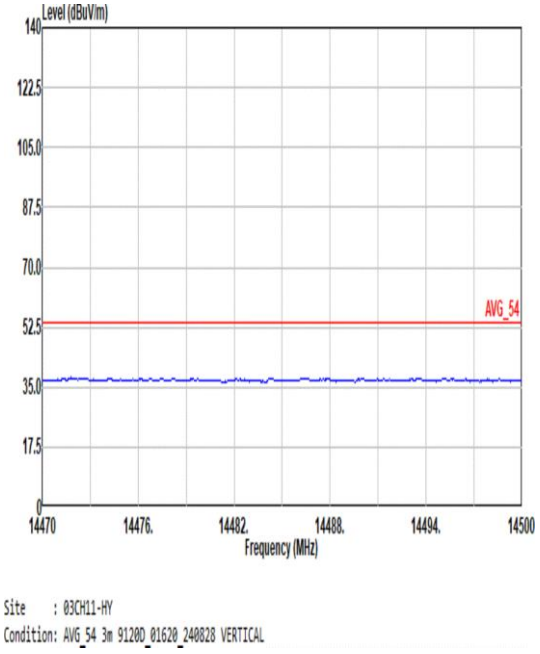
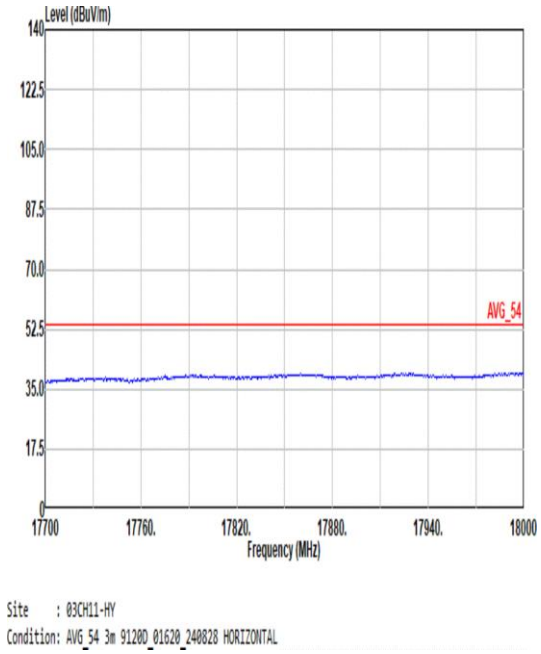
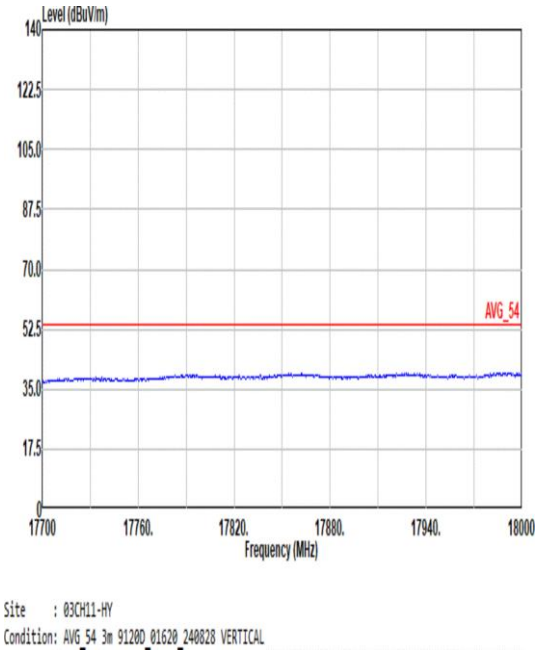
Mode	4	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11a_CH48_5240MHz	
ANT	1+2 (CDD)	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5143.52 56.98 74.00 -17.02 46.32 33.17 10.36 32.87 0.00 200 281 PEAK	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5240.00 114.05 ------ ------ 103.47 33.00 10.44 32.86 0.00 200 281 PEAK
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5081.36 46.79 54.00 -7.21 36.39 32.96 10.31 32.87 0.00 200 281 AVERAGE	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5240.00 106.74 ------ ------ 96.16 33.00 10.44 32.86 0.00 200 281 AVERAGE

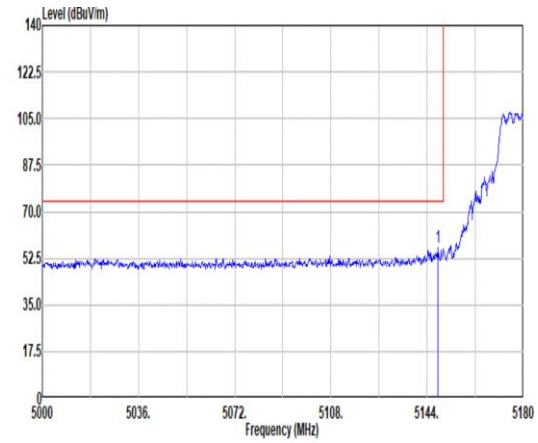
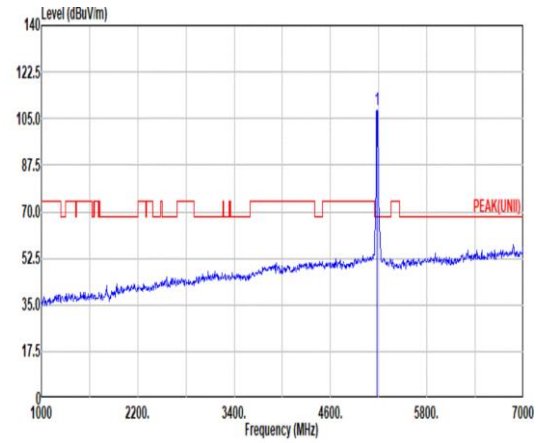
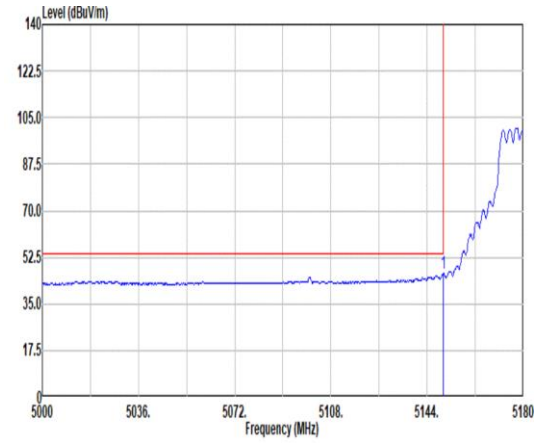
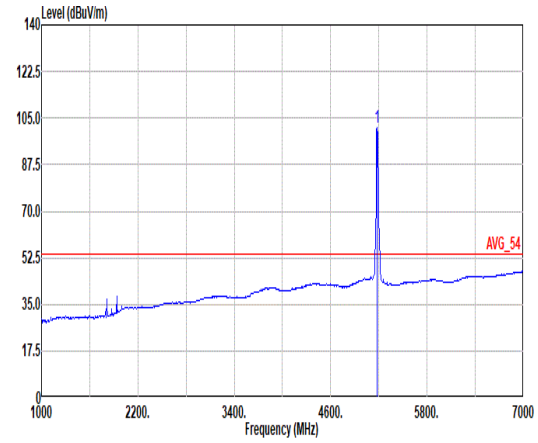
Mode	4	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11a_CH48_5240MHz	
ANT	1+2 (CDD)	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5366.50 52.78 74.00 -21.22 42.24 32.87 10.52 32.85 0.00 200 281 PEAK	Blank
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5400.60 43.36 54.00 -10.64 32.87 32.80 10.54 32.85 0.00 200 281 AVERAGE	Blank

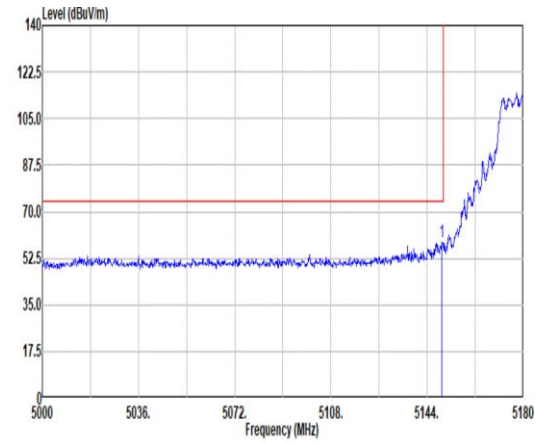
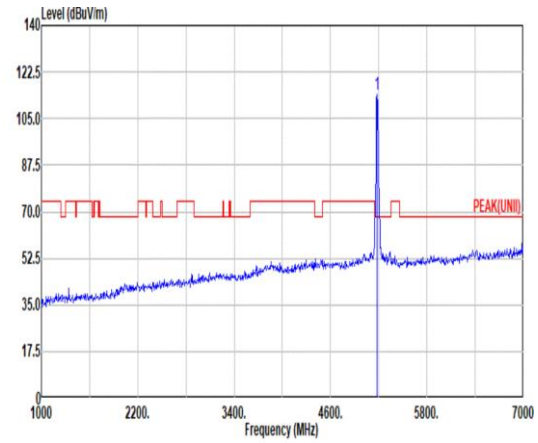
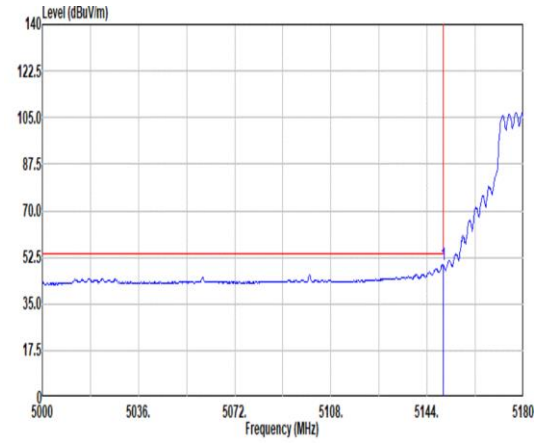
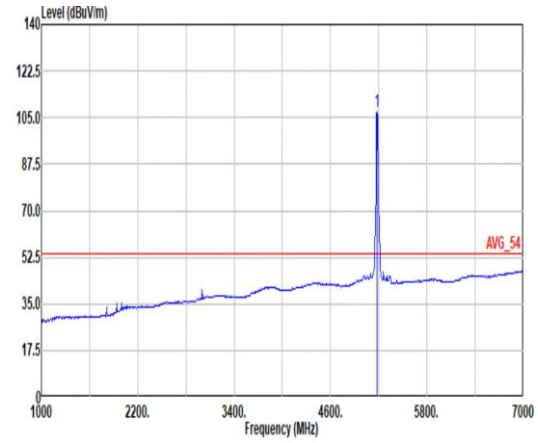
Mode	4	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11a_CH48_5240MHz	
ANT	1+2 (CDD)	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5139.68 59.01 74.00 -14.99 48.36 33.16 10.36 32.87 0.00 400 353 PEAK	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5240.00 119.71 ------ ------ 109.13 33.00 10.44 32.86 0.00 400 353 PEAK
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5084.00 49.21 54.00 -4.79 38.80 32.97 10.31 32.87 0.00 400 353 AVERAGE	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5240.00 112.20 ------ ------ 101.62 33.00 10.44 32.86 0.00 400 353 AVERAGE

Mode	4	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11a_CH48_5240MHz	
ANT	1+2 (CDD)	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5356.38 59.15 74.00 -14.85 48.60 32.89 10.51 32.85 0.00 400 353 PEAK	Blank
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5397.96 47.00 54.00 -7.00 36.51 32.80 10.54 32.85 0.00 400 353 AVERAGE	Blank

Mode	4	
	Harmonic	
	U-NII-1_5.15-5.25_802.11a_CH48_5240MHz	
ANT	1+2 (CDD)	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10480.00 46.08 68.20 -22.12 50.30 38.60 17.57 60.72 0.33 -- -- PEAK 2 15720.00 51.59 74.00 -22.41 53.86 37.64 21.66 61.90 0.33 100 349 PEAK 3 15720.00 45.63 54.00 -8.37 47.90 37.64 21.66 61.90 0.33 100 349 AVERAGE	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10480.00 50.52 68.20 -17.68 54.74 38.60 17.57 60.72 0.33 100 181 PEAK 2 10480.00 39.33 54.00 -14.67 43.55 38.60 17.57 60.72 0.33 100 181 AVERAGE 3 15720.00 50.29 74.00 -23.71 52.56 37.64 21.66 61.90 0.33 100 341 PEAK 4 15720.00 44.64 54.00 -9.36 46.91 37.64 21.66 61.90 0.33 100 341 AVERAGE

Mode	4	
	Harmonic	
	U-NII-1_5.15-5.25_802.11a_CH48_5240MHz	
ANT	1+2 (CDD)	
Pol.	Horizontal	Vertical
14.47G ~14.5G Avg		
17.7G ~18G Avg		

Mode	5	
	Band Edge	
	U-NII-1_5.15-5.25_802.11ac VHT20_CH36_5180MHz	
ANT	1+2 (CDD)	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5148.14 56.42 74.00 -17.58 45.73 33.19 10.37 32.87 0.00 200 47 PEAK	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 108.25 ------ ------ 97.63 33.10 10.39 32.87 0.00 200 47 PEAK
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.94 46.36 54.00 -7.64 35.66 33.20 10.37 32.87 0.00 200 47 AVERAGE	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_240828 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 101.51 ------ ------ 90.91 33.08 10.39 32.87 0.00 200 47 AVERAGE

Mode	5	
	Band Edge	
	U-NII-1_5.15-5.25_802.11ac VHT20_CH36_5180MHz	
ANT	1+2 (CDD)	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.58 58.53 74.00 -15.47 47.83 33.20 10.37 32.87 0.00 386 0 PEAK	 Site : 03CH11-HY Condition: PEAK(UNII) 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 114.11 ------ ------ 103.49 33.10 10.39 32.87 0.00 386 0 PEAK
Avg	 Site : 03CH11-HY Condition: AVG_BE_54 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.94 49.89 54.00 -4.11 39.19 33.20 10.37 32.87 0.00 386 0 AVERAGE	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_240828 VERTICAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 107.07 ------ ------ 96.47 33.08 10.39 32.87 0.00 386 0 AVERAGE